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ROYAL COMMISSION

ON

ENERGY

HEARINGS

HELD AT

CALGARY,

ALTA.

VOLUME No.:

7

DATE:

FEB 12 1958

OFFICIAL REPORTERS

ANGUS, STONEHOUSE & CO. LTD.
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E R R A T U M

In Volume 6, dated February 11,
1958, on page 887 at line 16,
the word "prevent" should read
"permit".

Mr. A. Gordon, M.A., Q.C. — Chairman
Mr. J. L. Lemay — Member
— — — — —
Mr. G. B. Pritchard — Member
Mr. G. B. Gunning — Member
Mr. R. B. Howland — Member
Mr. C. J. LeMay, Q.C. — Member
Mr. W. A. MacKay — Member

COMMITTEE CHAIRMAN:

Mr. A. B. Patterson, Q.C. —
Mr. H. H. Patterson —
Mr. J. J. Parkinson — Secretary to the
Committee.
Major E. L. Lefebvre — Assistant Secretary
to the Committee.



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ROYAL COMMISSION

ON

ENERGY

Hearings held at Calgary,
commencing Monday, February
3, 1958, at 10.00 A.M.

PRESENT:

Mr. H. Borden, C.M.G., Q.C.	--	Chairman
Mr. J.L. Levesque,	--	Member
Mr. G.E. Britnell,	--	Member
Mr. G.G. Cushing,	--	Member
Mr. R.D. Howland,	--	Member
Mr. L.J. Ladner, Q.C.	--	Member
Dr. R.M. Hardy,	--	Member

COMMISSION COUNSEL:

Mr. A.S. Pattillo, Q.C.

Mr. Miles H. Patterson.

Mr. J.F. Parkinson -- Secretary to the
Commission.

Major N. Lafrance -- Assistant Secretary
to the Commission.



APPEARANCES:

Representing Westcoast Transmission Company Limited; Pacific Northwest Pipeline Corporation and El Paso Natural Gas Company; and Jefferson Lake Sulphur Company.

Mr. E.J. Chambers, Q.C.	-	Counsel
Mr. Webster McDonald	-	Associate Counsel
Mr. C.R. Hetherington	-	Vice-President of Westcoast Transmission Company Limited
Mr. Coleman R. Sample	-	Ford, Bacon & Davis, Inc.
Mr. Paul Kayser	-	Chairman of the Board of Pacific Northwest and President of El Paso Natural Gas Co.
Mr. F.E. Lewis	-	Vice-President and Assistant to the President of El Paso Natural Gas Co.

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Wednesday,
February 12, 1958.

---Upon resuming 9.45 A.M.

THE CHAIRMAN: Gentlemen, the Commission will now resume its hearings. Mr. Pattillo, will you commence?

MR. PATTILLO: Mr. Chairman, today we will be dealing with the submission of Westcoast Transmission Company Limited and the associated submissions of Mr. Kayser and of the Jefferson Lake Sulphur Company. But before we commence those submissions, Mr. Turner of the Canadian Petroleum Association has a short statement on statistics which time did not permit him to deal with yesterday and which, for the purpose of the record, he proposes to read.

THE CHAIRMAN: Thank you, Mr. Turner.

MR. TURNER: I am just reading this, and if you have any questions we will have Mr. Stuart answer those questions.

Canadian Petroleum Association comments on statistics: In order to study the various problems that are evident in the matter of industry statistics as it applies to the reporting and releasing of such statistics, a sub-committee was formed under the Interprovincial Petroleum and Natural Gas Committee



of the Mines Ministers Conference. This sub-committee is composed of both industry and provincial government representatives. To date the sub-committee has devoted its time to the standardization of reporting forms on the provincial government level. The terms of reference of this sub-committee cover statistics on both provincial and Dominion level, and recently the Dominion Bureau of Statistics has been contacted in this regard. Some of the problems that are apparent to the sub-committee are as follows:

- 1) Duplication that exists in information requested by the provincial and Dominion government authorities from industry. The information requested is essentially the same. However, the formats of the forms they require to be completed, differ.
- 2) Lack of uniformity in the statistics released by the Dominion Bureau of Statistics and those released by the provincial authorities.
- 3) Lack of uniformity that exists in the use of definitions by the various governmental authorities.
- 4) The delay that exists on both the provincial and Dominion government levels in publishing of information on all phases of the industry.
- 5) Lack of more complete statistical data and forecasts regarding the supply and demand



in the petroleum industry in Canada.

These problems are all under consideration by the sub-committee, and suggested methods of remedying the problems will be put forth on completion of these studies.

That is all I have to say, sir.

THE CHAIRMAN: Thank you very much, Mr. Turner.

MR. HELMAN: Mr. Chairman, may I make a complaint? I have not been furnished with a copy of the actual exhibits that Westcoast intends to put forward, and although the 230,000 citizens of Calgary that I represent may not be as important as those in Los Angeles, I think, at least, I am entitled to the courtesy of those copies.

MR. PATTILLO: Mr. Chairman, may I just answer Mr. Helman on that? I will have to take the responsibility. I did ask the various companies submitting briefs to file twenty-five copies of their brief and accompanying documents.

MR. HELMAN: I am not complaining about you, Mr. Pattillo.

MR. PATTILLO: You just listen to me, Mr. Helman. Mr. Chairman, I made it very clear that those documents were open for inspection. I never, at any time, told anybody that the documents or the exhibits were going to be given to anybody other than the members of the Commission or the experts advising



the Commission. We have, in some instances, in order to assist others, given out copies when we considered that they were not of a confidential nature, but there is no responsibility on the Commission to make copies available nor on any of the companies submitting briefs to make copies available to other persons. Mr. Helman has just not understood the arrangements which I made very clear the first day.

MR. HELMAN: I would just like to make clear I was not complaining about Mr. Pattillo's position. I think Westcoast should have supplied the copies.

THE CHAIRMAN: Thank you.

MR. PATTILLO: Mr. Chambers is appearing as counsel for Westcoast. Mr. Chambers, you might like to introduce the people you have with you representing the company, Mr. Kayser, and Jefferson Lake Sulphur.

MR. CHAMBERS: Mr. Chairman and members of the Commission, there is one remark I would like to make with regard to Mr. D.P. McDonald, managing director of the company, who had collaborated and had a lot to do with the preparation of the brief. It was intended he should read it, but he phoned me this morning, early, that he was home with what he hopes is twenty-four-hour 'flu, and in his absence Mr. Charles Hetherington, vice-president of the company, will read the brief. I may say that Mr. Hetherington is active in the company and knows the contents of the brief.



One other matter: the announcement was made that some of the witnesses who are appearing before the Commission desire they should be sworn. While Westcoast is not mentioned definitely in the terms of reference, I am authorized to state that if the Commission so desires, any or all of those witnesses would be very pleased to be sworn.

THE CHAIRMAN: Thank you.

MR. CHAMBERS: At the conclusion of the City of Calgary submission, it will, perhaps, be recalled that I made a very short statement and there were one or two matters we desire to deal with when Westcoast's brief was submitted. I would like to submit this as a procedure, if it meets the Commissions' approval: that, following Mr. Hetherington's evidence, and he will be a witness as to a considerable portion of this brief in addition to reading it, after the conclusion of Mr. Hetherington's examination by Mr. Pattillo, I would like to have the privilege of putting two or three questions to him to deal with the matters referred to the other day.

THE CHAIRMAN: Two or three questions to whom?

MR. CHAMBERS: To Mr. Hetherington.

THE CHAIRMAN: Is that satisfactory, Mr. Pattillo?

MR. PATTILLO: That is quite satisfactory to me, Mr. Chairman.



MR. CHAMBERS: We are hoping Mr. McDonald will be available tomorrow for examination, as well.

THE CHAIRMAN: I was going to ask you to express to him our sympathy. I think we have all gone through that sort of thing. I am sorry he is not here.

MR. CHAMBERS: I would like to ask Mr. Hetherington to read the brief.

MR. PATTILLO: I think, before Mr. Hetherington begins, we should have the documents marked, and before we have the documents marked may I say, Mr. Chambers, I thank you very much for making a statement on behalf of the company as to the willingness to be sworn, and I think, in view of the fact that your company and Alberta and Southern and Trans-Canada are all very similar, and Trans-Canada has requested to be sworn, that we should have a similarity and, therefore, I am going to take advantage of your willingness and we will swear all the witnesses of your company.

MR. CHAMBERS: Mr. Chairman, may I interject to take care of a matter I had overlooked. There are two other short briefs or submissions. They are not submissions of Westcoast, but they have a bearing on the Westcoast picture. As Mr. Pattillo indicated, there is a statement we would like to have made to the Commission by Mr. Kayser on behalf of the Pacific Northwest Pipeline Corporation. Mr. Kayser is here and we have a copy of his submission, and Mr. Lewis, on behalf of Jefferson Lake Sulphur Company, is



expected to arrive in Calgary at noon today. I am making the suggestion, for consideration, that following the reading of the Westcoast brief that, perhaps, the briefs or submissions of each, Pacific Northwest and Jefferson Lake Sulphur, might be made and the witnesses examined because Mr. Kayser does not live here and neither does Mr. Lewis. The Westcoast men do. I am making that as a suggestion.

MR. PATTILLO: Mr. Chairman, on that point I entirely agree with Mr. Chambers that we should read all of the documents at one time, and I did agree with Mr. D.P. McDonald, yesterday, that the order in which they would be read in would be, the company's submission first, followed by Mr. Kayser and, finally, by Jefferson Lake Sulphur. As to the order in which I might question the witnesses, I do not want to make any commitments on that at the moment, but I have very much in mind the fact that Mr. Kayser and Mr. Lewis are from out of the country and have kindly come forward here, and I will try to meet their convenience.

MR. CHAMBERS: Thank you, Mr. Pattillo.

MR. PATTERSON: I am submitting a copy of the submission, which is in the hands of Mr. Belanger, and will be marked Exhibit C-12-1. I have reference to the submission of Westcoast Transmission Company Limited.

THE CHAIRMAN: Westcoast Transmission Company Limited brief will be marked Exhibit C-12-1.



---EXHIBIT NO. C-12-1: Submission of Westcoast
Transmission Company
Limited.

MR. PATTERSON: I believe there is also
a green volume in which, I think, there are thirty
documents contained. The green volume will be marked
Exhibit C-12-1-A because the numbering in the book
then follows quite logically.

---EXHIBIT NO. C-12-1-A: Green volume of thirty
documents.

MR. CHAMBERS: I will now call Mr.
Hetherington.

- - - -



Submission of
WESTCOAST TRANSMISSION COMPANY LIMITED

and

PACIFIC NORTHWEST PIPELINE CORPORATION
and EL PASO NATURAL GAS COMPANY

and

JEFFERSON LAKE SULPHUR COMPANY

APPEARANCES:

Mr. E.J. Chambers, Q.C.	-	Counsel
Mr. Webster McDonald	-	Associate Counsel
Mr. C.R. Hetherington	-	Vice-President of Westcoast Transmission Company Limited
Mr. Coleman R. Sample	-	Ford, Bacon & Davis, Inc.
Mr. Paul Kayser	-	Chairman of the Board of Pacific Northwest and President of El Paso Natural Gas Co.
Mr. F.E. Lewis	-	Vice-President and Assistant to the President of El Paso Natural Gas Co.

MR. HETHERINGTON: Mr. Chairman, I will
read the submission of Westcoast Transmission Company
Limited.

The following submission is presented by
Westcoast Transmission Company Limited in the first



phase of the inquiry to be conducted by the Commission with respect to the oil and gas industry.

It is the intention of Westcoast to present a further submission to the Commission when the Commission is prepared to hear evidence with respect to the regulation of natural gas transmission, taxation, and related subjects.

It is assumed also that the general competitive factors with respect to the present sale and prospective future sales of natural gas as related to the production of petroleum, coal, manufactured gas, and natural gas liquids, will be dealt with in general terms in the Canadian Petroleum Association submission. The comment of Westcoast on the above factors will be related only to the situation as it is deemed to have a bearing on the sale of gas to be transmitted through the Westcoast system as constructed and projected.

However, Westcoast would like to reserve the right to present a supplementary submission dealing with the matters above enumerated which may not be dealt with by the Canadian Petroleum Association, or if in the opinion of Westcoast additional information in respect thereof would be of value to the Commission.

The National Interest in Natural Gas:

Natural gas is of national interest because rapidly expanding discoveries have provided supplies of this



ideal fuel which already exceed any foreseeable needs of consumers in Canada. Gas has now become one of the important exportable natural resources which, if governed by sound national policies, will accelerate the economic growth and contribute in a large measure to the welfare of Canada.

The determination of a national policy in respect of the natural gas industry involves a study of three major phases, namely:

1. Supply, based on reserves, production and processing of gas.
2. Transmission, based on the economics of long distance pipelines.
3. Markets, based on population, industrial requirements, and the effect of competitive fuels.

These factors are all affected by the problem common to the development of other natural resources in Canada, namely, cost of transportation from the source of supply in one section of Canada to the major areas of consumption, such as Toronto and Montreal some 1,800 to 2,200 miles away from the established gas reserves, and to markets outside of Canada.

Urgency of a National Policy: In the early days of gas development in the Provinces of Alberta and British Columbia, the national policy with respect to gas was determined having regard to the



fact that the known reserves of gas were small in volume and the economical construction and operation of long distance pipelines was questionable. In latter years, however, there has been unprecedented increase in reserves through increasing discoveries in Alberta and in Northeastern British Columbia, and the demands of large new markets assure the economical construction and operation of long distance pipelines. National policy can now be determined on a basis that will assure the development of a natural gas industry serving Canadian consumers and providing for the export of surplus gas.



It is clear to the management of Westcoast Transmission Company Limited (Westcoast) that the oil and gas industry in Canada is approaching a fork in the road. The direction it will take depends a great deal on some decisions that have to be made soon by this Commission and by the Government of Canada.

Westcoast submits that the natural gas reserves of Canada far exceed the requirements of Canadian consumers and, for the benefit of Canada, its industries and its trading position generally, markets presently available must be secured for surplus Canadian gas. These additional markets are in the United States.

There is a real danger that lack of decision with respect to the marketing of the surplus gas at an early date will cost Canada a permanent loss of some of its more lucrative potential markets for natural gas. It appears certain that if potential United States markets now available to Canadian supplies of gas are not placed under contract with assurances of reasonable supplies over a term of years, these markets will be lost.

Such markets, if not acquired at this time, can be supplied by gas produced in the United States, permitting Canadian gas to enter United States markets only years hence. It can very well be that at such time, if history is to be



repeated, other fuels will have been developed which could render Canadian gas superfluous and as useless to Canada as the present coal resources of Alberta.

An immediate effect of the lack of decision on the development of the natural gas industry in Canada is that thousands of Canadians, who have been employed during the course of the last five years in the exploration and development phases of the natural gas industry, will be deprived of a livelihood and forced to await the development in Western Canada of some other industry with equal employment possibilities. Each gas drilling rig in operation employs about 20 men in the drilling crew. However, each drilling crew in operation is only part of the number of people employed in natural gas development. There are the geological and exploration crews. There are the transportation employees. There are the equipment and supply company, machine shop and other service employees engaged in maintaining each drilling rig with equipment and supplies now being increasingly provided from Canadian sources. If gas exploration and development programs are retarded or abandoned, many more Canadians will be affected than the few directly engaged in field work.

Unless there is a possibility of gas



export, there is no incentive for companies engaged in the exploration for oil to drill gas wells. At the present time when producers make a gas discovery they cap the well and walk away from the area, as a gas well is a greater liability than a dry hole inasmuch as it cannot be abandoned. On each occasion in the past that there has been a prospect for the sale of natural gas, producers increased their exploration effort and proceeded to the drilling of second or third wells following up a discovery in order to evaluate the gas they might have for sale. It is submitted that if gas export is prohibited or unduly delayed, efforts to establish gas reserves by step-out drilling will be abandoned with consequent economic loss of gas which might be utilized as a natural resource.

It should be realized that the gas industry, which will be developed under a national policy favorable to gas export, will provide employment, not merely during initial stages but for years to come. The fact that there will be substantial growing demand for gas will serve as a basis for continuous exploration and development programs. This work will maintain steady employment for exploration and development employees. Continued development of reserves will require continued building of plant facilities as well as



continued building of field and long distance transmission pipelines. Increasing volumes of by-products will be made available upon which to base local industries thereby providing permanent employment in the vicinity of the gas fields. It is developments such as the foregoing which are in the minds of the officials of Westcoast when they advocate a national policy favorable to the export of gas.

Westcoast as a pioneer in the long distance transmission of gas in Canada has made a continuing study of the current and prospective supplies of gas and markets in the west.

In 1951 it was apparent to the management of Westcoast that the proper and reasonable method of supplying natural gas markets in Canada, other than British Columbia, was based upon allocating a supply of gas to meet Alberta's future requirements, and dedicating surplus reserves in southern and central Alberta to the markets which could economically be reached in Eastern Canada. At the same time Westcoast contended that the reserves of gas in the Peace River area of northwestern Alberta and northeastern British Columbia were ideally located to supply consumers in the interior of British Columbia and the Lower Mainland area, with a surplus available to supply part of the gas demands of the consumers in the Pacific Coastal States, whose large



5

volume markets serve to bear the greater proportion of transmission costs.

The policy so advocated by the management of Westcoast was adopted by the Canadian authorities in authorizing the construction of the Westcoast project from the Peace River area through British Columbia, and also authorizing the construction of the Trans-Canada pipeline from Alberta to Ontario and Quebec.

The result of this policy is that the Westcoast system, which **was** first envisioned by Mr. Frank McMahon in 1935 and is today controlled and operated by Canadians, is Canada's first major natural gas pipeline. It was built without the benefit of any subsidy or cost to the people of Canada and it is providing a vital outlet for northern reserves, it is creating new industries for Western Canada, and new sources of revenue for Canada.

The importation of gas from Canada into the United States is subject to regulation under the Natural Gas Act of the United States. This regulation is carried out by the Federal Power Commission by virtue of its authority over the interstate gas pipeline companies. In those instances where the importation of gas into the United States has not created controversy between competing gas pipeline companies in the United States the Federal Power Commission has acted promptly in authorizing



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the importation of gas consistent with the interests of United States consumers. It has only been in those instances where the proposed importation of gas from Canada into the United States has been based upon the importing companies supplying gas in competition with existing pipeline companies serving the market area that delays have ensued in obtaining import authorizations. This situation occurred in the case of the Westcoast Transmission Company, Inc. attempting to serve a market which a competitive United States pipeline corporation was able to supply from United States sources. This situation prevails in the case of Midwestern Gas Transmission Company advocating the importation of gas from the Trans-Canada Pipe Line system for distribution in the market area served by Northern Natural Gas Company, Peoples Gas Light and Coke Company and the Michigan-Wisconsin Pipeline Company. (This statement is not intended as a comment on the merits of this latter contested proceeding but is submitted as a statement of fact).

Benefits from Westcoast Pipeline: On October 1, 1957, the Westcoast pipeline commenced the delivery of Peace River gas to the British Columbia Electric Company Limited for service in the City of Vancouver, and to Inland Natural Gas Co. Ltd. for service to almost all interior communities in British Columbia. By January 1958,



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the pipeline was transmitting some 290 million cubic feet of gas per day. This is being increased daily so that the line will be delivering in excess of 300 million cubic feet of gas daily during the balance of the winter season 1958.

The completion of the Westcoast pipeline project has added a new industry to the economy of Western Canada. Seven years ago, when Pacific Petroleums Ltd. (and I will refer to it as "Pacific Petroleums" hereafter), one of the sponsors of Westcoast, first started major operations in the Peace River area, the economy of the area was solely agricultural. The village of Fort St. John had a population of about 800; Grande Prairie about 2,600; and Dawson Creek about 3,500. Fuel was supplied by expensive coal, oil and wood. Westcoast first piped gas to Dawson Creek and then to Grand Prairie and the villages en route. Now, all of these communities enjoy the economy and convenience of natural gas.

For the past two years Westcoast has employed more than 2,000 men in the construction of its pipeline. In addition, Westcoast, Pacific Petroleums, Phillips Petroleum Company and Jefferson Lake Sulphur Company employed more than 800 men at Taylor, British Columbia, in the construction of the gas scrubbing plant, refinery and sulphur plant at Taylor. Pacific Petroleums and



its associates have spent approximately 37 million dollars in the exploration and development of gas in the Peace River area. Prior to the exploration program of Pacific Petroleum there were only two or three drilling rigs working in the area. Following the granting of the export permit by the Alberta Conservation Board in 1952, activity in the area has continuously increased and in 1956 and 1957 a high in activity was reached with 36 rigs working in the Peace River area.

The operation of the pipeline itself provides employment for more than 300. The processing plants have an operating force of about 135 people; and about 200 people are employed in gas field operations. The refinery will manufacture about half of the motor gasoline requirements for the Peace River area and its propane production will materially assist in alleviating any propane shortage in Western Canada. The sulphur plant will produce enough sulphur to supply all of the pulp and paper mills and other industries in British Columbia.

The economic benefits of the Westcoast project to the Peace River area and British Columbia are apparent. The population of Fort St. John has quintupled to 4,000 and the population of Grande Prairie and of Dawson Creek has doubled to 6,000 and 7,500 respectively. Essentially 100% of the



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domestic, commercial and industrial requirements for fuel in these areas are now supplied by low cost gas. The interior communities of British Columbia are now supplied with gas, including the communities in the Okanagan Valley and Trail-Nelson areas. It is interesting to note that the volumes required for Vancouver in January, 1958, have reached the market demands originally estimated for the fifth year of operation, namely 1961.

As a result of the market facilities provided by the Westcoast pipeline, there will not be a large economic loss from the flaring and wasting of natural gas incidental to the production of oil in the Peace River area. This area can be the first major oil area developed in Canada which will have an outlet for gas in the development years of oil field operation. There will not be the tremendous economic waste which has occurred in Alberta from the production, along with oil, of billions of cubic feet of gas from Turner Valley, Redwater, Leduc, Pembina, and other oil fields prior to the provision of market outlets for this gas.

In addition, since there is a market for any gas discovered, there will be a more intensified search for both oil and gas, because exploration costs can be recovered from two possible sources of revenue.

Since Westcoast, a Canadian company, managed



by Canadians, demonstrated it could obtain in the money markets of America some \$200,000,000 for investment in a gas pipeline serving new fields and new markets, the attention of engineers, investors, and developers of natural resources has been attracted to a northern area as never before in Canada's history.

There are constant demonstrations of this additional interest, as evidenced by the extensive preliminary engineering investigations being carried on by various groups in the minerals, timber and other resources of northern British Columbia and in the potential power development on the Peace River. There has been renewed interest in a north-south railway to Alaska. The opening up for settlement of additional areas of farm lands in the northern areas of both Alberta and British Columbia has been accelerated.

The construction of the Westcoast pipeline project has given encouragement to the Province of British Columbia in making its decision to extend the Pacific Great Eastern Railway into the Peace River area. The prospective shipment of sulphur and hydrocarbon by-products extracted from the gas transmitted by the Westcoast pipeline provided the potential revenue required to make the railway possible. This railway will provide, for the first time, direct rail access to the Pacific Coast



for the grain, cattle and other products of the area. Further, because of the availability of gas, the British Columbia Power Commission has been supplied with gas for fuel in its power installations throughout the interior of British Columbia. This supply of fuel at a lower cost than that of other fuels available makes it possible for the Power Commission to extend its service throughout the interior of British Columbia, including its rural electrification programs.

It is only by opening up the northern areas in like manner that Canada can realize her full potential as a nation.



B:h
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It is pointed out, however, that export of the gas from these northern regions is essential if development is to proceed. The Westcoast pipeline now in operation, was made possible because there was a market in the United States for a sufficient volume of gas to justify the financing and construction of the pipeline. The export volumes of gas must be transmitted with the volumes of gas required to serve markets in British Columbia in order to permit the sale of the gas in the British Columbia markets at an economic price.

Export Market for Natural Gas: Every consideration of discovery trends in the search for oil and gas pointed to the fact further exportable volumes of gas would be made available in increasing volumes in the Peace River area and elsewhere in Alberta. Accordingly, having provided under contract with the distributing companies in British Columbia for all their foreseeable requirements of gas, Westcoast officials looked to the United States for markets for additional supplies of gas from Canada surplus to Canadian requirements. Conversations with the distributors of gas in the Pacific Coastal States disclosed that there was a ready market in the area served by them for much larger volumes of gas from Western Canada.

There are other sources, however, from which gas required in the Pacific Coastal markets



may be supplied, namely, Texas, New Mexico, Colorado, and the Mountain States. Westcoast, therefore, entered into a contract to deliver additional gas to the Pacific Northwest Pipeline Corporation (Pacific Northwest) at Huntingdon, British Columbia, through its Peace River pipeline facilities. At the same time Westcoast entered into a contract to supply a portion of the gas required by the Pacific Northwest system through a pipeline to be constructed by Westcoast from southern Alberta through southeastern British Columbia to the International Border near Kingsgate, British Columbia, northeast of Spokane, Washington. Pacific Northwest in turn agreed to construct a pipeline from Spokane to Kingsgate. The Pacific Northwest Pipeline is connected with the El Paso Natural Gas Company (El Paso) system. El Paso proposes to build facilities connecting with the Pacific Northwest pipeline so as to make the gas from Canada available to consumers in the State of California. The above contracts in each instance are subject to each party receiving all governmental authorizations required to implement them.

As in the case of export of gas from the Peace River area, the Westcoast proposal for export of gas from southern Alberta is to purchase for export and deliver to the United States customer only such volumes of gas as are clearly surplus to the requirements

1. *Phragmites australis* (Cav.) Trin. ex Steud.

Journal of Management Education



of Alberta, British Columbia and eastern Canadian markets. The volumes proposed to be exported, as applied for under the provisions of The Gas Resources Preservation Act of the Province of Alberta, are sufficient to meet the immediate requirements of the United States customer, make the project economic, and yet not prejudice in any way the future supplies of gas for the Canadian consumers either in Alberta, British Columbia or the eastern provinces.

This proposal by Westcoast is not contrary to the policy of allocating gas reserves between eastern and western markets advocated by Westcoast in 1952 and 1953, but is in fact supplementary thereto. The gas reserves discovered and available for production in the province of Alberta now far exceed any estimates deemed reasonable in 1952. The study, subsequently described in this submission, of the economics of gathering and distributing gas within the province of Alberta to supply, first, the requirements of Alberta consumers and, secondly, the export markets clearly establishes that limited export of gas from southern Alberta to the United States markets is a necessity:--

- (i) for the maintenance of an orderly development of the natural gas industry in western Canada, and
- (ii) to prevent the waste of oil field gas, and
- (iii) to provide an economic basis for financing



and operating the processing plants required to recover hydrocarbons and sulphur from wet and sour gas areas.

Gas Reserves: In the following section of this submission there is set out the estimate of gas reserves in Alberta and British Columbia compiled by the engineering and geological staff of Westcoast.

This estimate of gas reserves in the Provinces of Alberta and British Columbia may be summarized as follows:

Recoverable pipeline gas: 24.5 trillion cubic feet

Future potential reserve: 170 to 300 trillion cubic feet

Conclusion: It is respectfully submitted that in the factual data set out in the presentations made to it, the Commission will find ample evidence upon which to conclude that the export of natural gas to United States markets is essential to the national interest of Canada.

It is further submitted that the Commission can also find that the gas reserves will be vastly increased in the future by the incentive given to gas exploration and development with the opening up of the presently available United States markets for Canadian surplus gas.

The calm announcement by the United Kingdom in January, 1958, that it expects to have hydrogen



power on a commercial basis by 1960 warns us that the days when natural gas will reign supreme as a source of fuel and energy cannot be expected to last forever. Already the first atomic energy electric generating plant is in California supplying part of the energy requirements of the principal western market for surplus Canadian gas.

There is a grave danger if the development of this natural resource is postponed indefinitely, that great volumes may be completely wasted and the gas industry will not have the opportunity to play the outstanding role in developing the economy of Canada that should rightfully belong to it.

Potential Gas Reserves of Alberta and British Columbia: The gas producing areas of Alberta and British Columbia are situated in the Western Canada Sedimentary Basin described in the submission by the Canadian Petroleum Association as consisting of an area 800 miles wide at the International Boundary between Canada and the United States stretching from the Precambrian Shield in Manitoba on the east to the Cordillera on the west. Northwestward the area extends 1,600 miles up to the delta of the Mackenzie River. At the Arctic coast its width is about 250 miles.

The area is stated by Dr. George S. Hume, one of Canada's outstanding geologists, to comprise 712,000 square miles containing a volume of sediments



with a thickness of 1,000 to 16,000 feet in depth, with a total volume of 950,000 cubic miles. The ultimate recoverable oil of this basin is estimated at 50 billion barrels and may be as large as 100 billion barrels. This is exclusive of the bituminous sands of northern Alberta.

With regard to the volume of ultimate recoverable gas in the same area, Dr. Hume stated the reserves of gas range from 170 trillion to 300 trillion cubic feet. His estimate of potential gas reserves is as follows:

It has already been shown that a figure of 6 trillion cubic feet of gas is being found in the United States for each billion barrels of oil. In view of the prospects for gas, as already shown by discoveries, and in view of geological opinion, particularly in regard to foothills structures, this figure does not seem too high for Canada. Applied to the minimum figures of 28.5 billion to 47.5 billion barrels of oil, the minimum figures for possible gas reserves would be 170 to 285 trillion cubic feet for the Western Canadian sedimentary basin. Applied to the more reasonable figure of 50 billion barrels, it would be 300 trillion cubic feet. Even the higher figure of 300 trillion is slightly lower than one-quarter



of what is being predicted for the ultimate figure in the United States where, in spite of a considerable greater density of drilling than in Canada, the finding of 24.9 trillion cubic feet of new natural gas reserves during 1956 constituted the largest single discovery year in the history of gas development in that country. It **is** also reported that "in the period 1951 - 1955 in the United States 82.5 trillion cubic feet of new natural gas reserves were proven to exist. In the preceding five-year period covering 1946 - 1950 new gas found totalled 67.3 trillion cubic feet." This is a discovery of almost 150 trillion cubic feet in 10 years. This period corresponds to the decade in which there was a tremendous expansion of the natural gas industry in the United States, and in which the value of natural gas received greater recognition than had previously been the case.

There is no doubt, therefore, with proper incentives the natural gas industry of Western Canada can have a similar proportional expansion in the next decade, since it can be stated with a high degree of confidence that the ultimate amount of gas to be discovered in the Western Canadian basin is in the hundreds of trillions of cubic feet.



MR. FRAWLEY: Mr. Hetherington, would you identify that quotation, please?

MR. HETHERINGTON: That is taken from a report of Dr. Hume.

MR. FRAWLEY: To the company?

MR. HETHERINGTON: No, to the Canadian Petroleum Association.

THE CHAIRMAN: May we have the date of it, Mr. Hetherington?

MR. HETHERINGTON: Dr. Hume is here, and he may have the date of the report.

MR. HUME: It was the report given to the Board.

THE CHAIRMAN: Yes, it was in the submission yesterday.

MR. FRAWLEY: Yes, it sounded like yesterday's submission by the CPA, but I wanted to have it definitely identified.

MR. HETHERINGTON: Yes, that is right.

MR. FRAWLEY: Thank you.

MR. HETHERINGTON: Of the total volume of sediments in Western Canada approximately 450,000 cubic miles are situated in the Provinces of Alberta and British Columbia. Accordingly having regard to the prospective productive capacity, which is much higher for Alberta and British Columbia than could be expected in Manitoba and Saskatchewan, at least one-half of the potential gas reserves are



situated in the two western provinces. On this basis, the potential reserves of gas in Alberta and British Columbia are at the minimum, in the range of 85 to 150 trillion cubic feet.

The Trend of Gas Discoveries in South-western Alberta: The engineering staff of Westcoast made an analysis of the trend of the discovery of reserves in the southern and central Alberta area from which Westcoast proposes to obtain its supplies of gas for additional export to the Pacific Coastal States. The area selected is contained within the hatched lines set out on the map on page 14. The intervals upon which the discovery trend is established were selected to correspond with the effective dates of the various reports of the Oil and Gas Conservation Board containing reserve estimates. A summary of the wildcat wells drilled in this area during these intervals are as follows:--

Interval	Number of Wildcat Wells
Prior to Jan. 1, 1951	183
Jan. 1, 1951 to Jan. 1, 1952	43
Jan. 1, 1952 to June 30, 1953	88
June 30, 1953 to March 31, 1954	67
March 31, 1954 to June 30, 1955	100
June 30, 1955 to Jan. 31, 1957	150

The graph on page 13 illustrates the discovery trend in initial disposable reserves per



wildcat well drilled. The average reserves discovered per wildcat well drilled during these years was 10 billion cubic feet. The results plotted on a cumulative basis indicate the trend in initial cumulative disposable reserves discovered per cumulative number of wells drilled.

It is estimated that during the next 30 years an average of 100 wildcat wells per year will be drilled for the first 10 years, 75 wildcat wells per year will be drilled for the next succeeding 10 years, and 50 wildcat wells per year in the third 10-year period. On this basis the density of wildcats would be about 3 wells per township of approximately 23,000 acres.

I emphasize that the number of wells referred to are the wells drilled in this area outlined on the map in Southern Alberta and not the province as a whole.

As illustrated on the graph, page 13, the cumulative discovery trend since June 1953 has varied from 9.5 to 12.5 billion cubic feet of gas per wildcat well. If during the next 30-year period an average of only 10 billion cubic feet of gas per well is discovered, the estimated total additional reserves discovered in this small area of Alberta would be 22.5 trillion cubic feet. This 22.5 trillion cubic feet is equivalent to the whole of the recoverable pipeline reserves in the



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Province of Alberta as estimated by Westcoast as of this date. It is submitted that this approach to estimating the potential reserves of the Province is corroborative of the overall approach to estimating potential reserves adopted by Dr. Hume in the reserve estimate submitted by the Canadian Petroleum Association.

The chart on page 15 shows the increase in the reserves of gas in the Province of Alberta for the years 1951 to 1957 inclusive.

The chart on page 16 shows a comparison of the gas used each year in the Province of Alberta for the years 1952 to 1957 inclusive as contrasted with the average amount of additional gas reserves discovered in each year for the same period.

The chart on page 17 shows the percentage of the gas produced in Alberta in each of the years 1952 to 1957 inclusive divided into the volumes of gas used locally and for export, and gas wasted by flaring in the field.

It is interesting to note that in 1957 more gas was wasted than was used in 1952.

THE CHAIRMAN: Excuse me, Mr. Hetherington. In the chart on page 16 do the words "gas used each year" include this use in Alberta, or does it include gas exported?

MR. HETHERINGTON: That includes -- I want to be sure that I am right. It is the amount



of gas shown by the Conservation Board as being produced for usable purposes in the Province of Alberta and, accordingly, would include any volumes used for export. Those volumes, of course, were very small during these years.

THE CHAIRMAN: Thank you.



MR. HETHERINGTON: Recoverable Pipeline

Gas Reserves in Alberta and British Columbia:

Basically, gas reserves are determined by two methods:-

(a) The volumetric method which is the only applicable method for new gasfields in which volume of pore space within a reservoir rock available for containing gas is estimated, and

(b) the pressure decline method applicable to established producing fields in which the decline in pressure is related to the volume of gas removed and therefrom the ultimate available recoverable gas estimated.

With the exception of the Viking-Kinsella field near Edmonton and the Turnery Valley field near Calgary, and a few smaller fields, all estimates for other fields must be based on the volumetric method inasmuch as the fields are new and there is insufficient production history from which a pressure decline determination can be made.

Since the volumetric method requires an estimate of the volume of pore space within reservoir rock available to contain natural gas, the estimate of necessity must be based upon expert opinion, giving consideration to all of the available factors.

In the Docket G-580-Natural Gas Investigation conducted by the Federal Power Commission of the United States from 1945 to 1948, the Commissioners Smith and Wimberly in writing their report referred



to the estimating of gas reserves as follows:-

"Estimating the volume of gas reserves,
"rather than being an exact science, re-
"quires the application of trained judgment
"to limited fundamental knowledge of under-
"lying conditions. In a consideration of
"reserve estimates it is well to appre-
"ciate the many variable factors which
"have affected their determination.

"There may be variations not only in
"procedures and degree of judgment exer-
"cised, but there may also exist consider-
"able differences in the standards of
"reporting.

"Usually estimates are made of 'proved'
"reserves only. This term, as previously
"noted, is not subject to precise defini-
"tion, for an area is never entirely proved
"until it has been completely developed.
"However, sufficient knowledge of the for-
"mation and the limits of the structure
"may be obtained before a field has been
"fully drilled, to provide the basis for a
"reasonable estimate of the volume of gas
"recoverable. Particularly in new fields,
"there exist for the estimator difficult
"problems in determining the limits of
"the reservoir.



"Conditions may indicate that a field
"extends beyond the points for which avail-
"able data will firmly support. In such
"areas, reserves may be classified less
"definitely, as probable but not proved.
"Thus, there is considerable latitude in
"designating reserves as proved or pro-
"bable; much depends upon the good judg-
"ment of the estimator."

The estimate presented to the Commission by the Canadian Petroleum Association following the pattern of estimating of gas reserves adopted by the American Gas Association and the American Petroleum Institute over a period of some years, is a conservative estimate comprised of individual companies' or producers' estimates furnished to the Association for the purpose of providing the Association with statistical data useful for the evaluation of reserves for comparative purposes and to illustrate the trend of decreasing or increasing gas reserves from year to year.

The intent in such estimates is to make the calculation of reserves consistent from year to year and generally to include as proved only the estimated volumes of gas underlying wells already drilled with little consideration to the areas in the vicinity of the drilled wells. Such areas are generally not classed as proved but as probable, so



as to give effect to a minimum conservative estimate for proved areas, particularly in respect to individual new well discoveries.

The conservative nature of this statistical estimate is illustrated in the fact that in succeeding years the major increase in additions to proved reserves of oil and gas added each year are due to re-valuing and increasing the estimates of reserves from discoveries of previous years following further drilling and study of the data on which the initial estimates were made.

The reserve estimates provided, often in confidence, to such associations for the above mentioned statistical purposes are not relied upon by the natural gas industry as estimates upon which the financing, development and operation of specific projects are carried out. In each case in which there is a prospect for the expenditure of substantial sums in development drilling, pipeline and plant capacity, it is the custom in the natural gas industry to have specific estimates of the reserves carried out by recognized geological and engineering consultants who have had years of experience and who have had the opportunity to study the results of natural gas production from many fields.

These consultants give consideration to all of the available information and do not necessarily limit the productive acreage to drilled areas



but include in their proved reserve estimates areas defined by geologic interpretation based on sub-surface and other information interpreted on the basis of the experience of the consultant in each case. It is the estimates of proved gas reserves prepared by such consultants that have provided the basis for investment in pipeline and plant facilities by insurance companies and other large-scale investors for many years.

After specific studies of the nature referred to above, the geological and engineering staff of Westcoast have estimated the proved reserves of gas in Alberta and British Columbia for the purposes of operations of the Westcoast project and for the purpose of providing a basis for the investment of funds in the proposed Westcoast pipeline from Southern Alberta to Kingsgate, British Columbia. This estimate is summarized as follows: the heading at the right should read, "Recoverable Pipeline Reserves, BCF -- either billion cubic feet or three M's. The table reads:

	Recoverable Pipeline Reserves MMcf
Alberta	22,300
British Columbia	2,200

That would be 22.3 trillion in Alberta; in British Columbia, 2.2 trillion.

The map on page 14 shows the location of



the principal gasfields in Alberta. The gas reserve within these fields has been allocated in the table starting on page 22 on the basis of location and economics to supply local requirements, the various export pipelines and the proposed Westcoast export of gas from Southern and Central Alberta.

On the last page of the tables the gas reserve available for each use is totalled for all fields. The gas requirements and the requirements for gas as a per cent. of the available supply is also shown. The estimated reserves as detailed in the table are one and one-third the total requirements for local use in the next thirty years, for the authorized pipelines including additional gas for the Trans-Canada Pipe Line system in the volume of 2.75 trillion cubic feet and the estimated requirements of the proposed Westcoast pipeline to Kingsgate, British Columbia.

This table is one of our most important exhibits, and I would like to deviate ---

MR. MACLEOD: Excuse me, before we go on: I wonder if you could tell me who made the allocation you refer to?

MR. HETHERINGTON: Yes, I made the allocation along with our Westcoast engineers. I would like to deal in some detail with this table because it is important. The source of the reserve estimate is shown on the right hand side



opposite each field. Where the word "board" is used, that refers to the Oil and Gas Conservation Board report of January, 1957. Where there are no substantial developments or changes since that date of a year ago we used the Board's figures. Where the source says, "Westcoast", the Westcoast staff made the estimate, and we made the estimate in each case where there had been substantial development drilling or step-up drilling or new discoveries. Some of these fields were not even included in the Board's report of a year ago. Where the source of the estimate says "Sproule", that was made by Dr. J.C. Sproule and associates. The fields are listed alphabetically along the left side of the table, and the table continues, as you can see, for a number of pages. I have studied the geographical location of all of these gas reserves and I know a good bit about the economics of transmitting gas from these various reserves to the logical consuming points, and I have allocated all of the gas in Alberta as between the headings I have shown. The first is Canadian Western Area: where a gasfield is in the vicinity of Calgary or in the vicinity of the gas pipelines of Canadian Western and it is logically suited for use by Canadian Western, I have indicated that reserve for Canadian Western. Similarly the next column shows the fields in the vicinity of Northwestern Utilities Area around Edmonton. The next column shows the



fields in the Medicine Hat area. With respect to local areas, all fields that are in the vicinity of small towns and villages in Alberta that are not presently supplied have been allocated to use by those local communities. In the Peace River Area I have shown all the fields which lie in the Peace River area of Alberta. The next column is the gas available or authorized for Montana in the south-eastern part of Alberta. The next column shows the gasfields available or authorized for Trans-Canada. This includes all of the fields presently authorized for Trans-Canada by the Oil and Gas Conservation Board plus my opinion of the gasfields that could logically be connected into the Trans-Canada system.



Then in the next column I show gas requested by Westcoast.

The next column is a catch-all column for gasfields that are too small to be of economic value at this time. In many cases it can be expected that new step-ups or new discoveries in the vicinity of these fields will expand the reserves to the point where they can be made economic, but at this time they are not economic.

Turning to the last page of the table, which is page 26, on the basis of my allocation and our estimates of gas reserves there is adequate gas surplussed to the needs of Canada to permit Westcoast to be granted its application presently before the Oil and Gas Conservation Board.

In the Canadian Western Area, that is the first column of figures, the total reserve of all fields in the Canadian Western area is 3,690.5 billion cubic feet as compared to their estimated requirements for the next thirty years of 2,324 billion cubic feet. In other words, the available gas today is equal -- to put it the other way, the estimated requirements for thirty years for the Canadian Western area amount to 63 per cent. of the gas that is presently proved and that today, in the Canadian Western area, similarly, the requirements of the Northwestern Utilities Area for thirty years amounts to 67 per cent. of the gas that is



proved and available in the Edmonton and North-western Utilities area.

In the Medicine Hat Area, the gas required for Medicine Hat and for export to the Saskatchewan Power Commission amounts to 69 per cent. of the available supply. In the next column, Local Areas, this needs very little explanation, 249.1 billion cubic feet of gas available in fields adjacent to small communities in Alberta. The Alberta Board estimates that if these communities were served they would require 892 billion cubic feet over the next thirty years. The available use of 892 billion cubic feet will only come to pass if, in fact, the local communities are connected up to those fields. Most of these communities are very small and it will require gas discovery in the vicinity of the town in order to make it possible to serve the town at all. So, if new gas is not discovered to supply the town, the towns will not be supplied and, of course, the requirement will not be there.

In the Peace River Area, considering the amount of gas required for Provincial use and for export to Westcoast and Dawson Creek, British Columbia, we have 100 per cent. of our requirements. The requirement of Westcoast, for the purpose of financing, is, approximately, a twenty-year supply and I am referring here to a thirty-year supply, so the fact that the requirements are 100 per cent. of



the available supply does not adversely affect the situation at the twenty-year mark. It is similarly true of the Montana Power; the Montana export situation. Montana was granted the right to export 294 billion cubic feet from fields that contained 294 billion cubic feet. For gas authorized for Trans-Canada, they are presently authorized to take out 4.35 trillion cubic feet and I can see that **it is** logical. At least, 7.1 trillion cubic feet can readily be hooked into the Trans-Canada system, so this makes it possible -- what I have attempted to do here, is to provide for additional gas for Trans-Canada which, even though it possibly has not been made public by the company but which is common knowledge, that Trans-Canada will need all this additional gas.

In the last column we are asking to export from Southern Alberta 1.3 trillion and we have 1.8 trillion of proved reserves in the three fields we are talking about, Savanna Creek, East Calgary and Wimborne. There remains 828 billion cubic feet of gas in little fields sprinkled around the country that are beyond economic reach at this time. Going to our total figure, our estimate of the proved gas reserves in Alberta is 22333.3 trillion. Estimated requirements include export for which we have an application pending which is 15.2 trillion including all proven requirements. All expanded



Trans-Canada requirements amount to 68 per cent.
of the available supply.

MR. FRAWLEY: You have not left very
much for Alberta and Southern.

MR. BETHERINGTON: That is right. I do
not have a column for them here.

MR. HELMAN: You did not have room on
the page, is that it?

MR. FRAWLEY: That last column ---

MR. PATTILLO: That is the uneconomic; is
that what you mean, Mr. Frawley?

THE CHAIRMAN: Perhaps you should add a
column.

MR. PATTILLO: Mr. Chairman, perhaps this
might be a good place to have a break.

THE CHAIRMAN: We will have a break for
ten minutes.

---A short recess.

THE CHAIRMAN: Gentlemen, we shall now
resume. Mr. Hetherington, Dean Hardy would like to
ask you a question.

MR. COMMISSIONER HARDY: Mr. Hetherington,
I have just one short question in explanation of
page 25 under Redwater. The figure 72.5 bcf.
There is no source of that estimate given.

MR. HETHERINGTON: I am sure that just
must be an oversight, Dean Hardy. That must be the



Board's estimate. We did not make an independent estimate. I will check on that but I am quite sure that is so.

MR. COMMISSIONER HARDY: The figures are about right, 72.5?

MR. HETHERINGTON: Yes.

The Westcoast Project in British Columbia and Northwestern Alberta: Westcoast was incorporated by Act of Parliament of Canada on April 30, 1949. The principal executive offices of Westcoast and its head office are located in the Pacific Building, Calgary, Alberta. The pipeline operating offices are located at 1155 West George St., Vancouver, British Columbia.

The first venture of Westcoast was the construction and operation of a 4 1/2-inch pipeline, 17 miles in length, from Pouce Coupe, Alberta, to Dawson Creek, British Columbia, for a 29-month period from December 1950 to April 1953. The property then was transferred to Peace River Transmission Company Limited, having served the purpose of determining the feasibility of gas pipeline transmission in the temperatures prevailing in the far northern areas of Alberta and British Columbia. This project was authorized by appropriate orders issued under the Pipe Lines Act of Canada and The Gas Resources Preservation Act of Alberta hereinafter described.



Authorizations required for Gas Pipeline Construction: Under the British North America Act of 1867, the Parliament of Canada has exclusive jurisdiction over inter-provincial and international trade, including the transportation of natural gas between the provinces and in international commerce. This control is exercised under two statutes of the Parliament of Canada, namely, (1) The Pipe Lines Act, which requires the approval of the Board of Transport Commissioners for Canada for the construction and initial operation of an inter-provincial or international pipeline and (2) The Exportation of Power and Fluids and Importation of Gas Act, which requires a license from the Minister of Trade and Commerce of Canada for the exportation or importation of natural gas.

By an order dated June 6, 1955, the Board of Transport Commissioners for Canada approved the proposed route of Westcoast's pipeline and granted an extension of time for the construction and completion of the pipeline until October 31, 1957. By an order dated July 29, 1957, the Board of Transport Commissioners authorized the proposed extensions of Westcoast's gathering system in British Columbia, subject to completion in 1958.



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On June 27, 1955, Westcoast received an amended license from the Minister of Trade and Commerce to export from Canada up to 125 billion cubic feet per year (approximately 343,000 Mcf of gas per day) for a period of 20 years from the commencement of such exportation. This export license is contingent upon Westcoast's agreement to supply gas to any Canadian consumer without impairment to any existing service including service to Inland Natural Gas Co. Ltd. (Inland), British Columbia Electric Company Limited (B.C. Electric) and Pacific Northwest Pipeline Corporation (Pacific Northwest), provided such Canadian consumer can be reasonably economically supplied. The Exportation of Power and Fluids and Importation of Gas Act, passed by the Parliament of Canada in 1955, specifically provides that any license issued thereunder can be terminated for a violation by the licensee of the terms of the license granted and the regulations applicable thereto after notification to the Licensee of such default and the failure of the licensee to remedy such default.

In addition to the export license, Westcoast also received a license dated November 18, 1955, to import natural gas from Pacific Northwest for interim service to B.C. Electric, which terminated with respect to deliveries to B.C. Electric on October 1, 1957, but remains in effect with



respect to such volumes as Westcoast may require for service to its system in the event of emergency interruption of gas from Canadian sources.

The petroleum and natural gas leases issued by the Government of Alberta contain a covenant by the lessee that the gas produced from the leased lands shall not be used outside the province without the prior consent of the Lieutenant Governor in Council. The appropriate Orders in Council expressing the consent of the Lieutenant Governor in Council have been obtained in connection with the lands located in Alberta from which Westcoast obtains a portion of its gas supply. Westcoast and Westcoast Transmission Company (Alberta) Ltd. (Westcoast Alberta) have also obtained the issuance of a permit to them under The Gas Resources Preservation Act of the Province of Alberta, dated June 16, 1952, authorizing the exportation of gas from the Peace River area of the Province of Alberta to the markets to be served by Westcoast. This permit, as amended, is for a term expiring December 31, 1979 and restricts the amount of gas to be exported from the province, providing that not more than 1,080 billion cubic feet shall be exported during the term of the permit, nor more than 56 billion cubic feet in any 12-month period, nor more than 190 million cubic feet in any one day.

Apart from the authorizations required by any Canadian company desiring to export gas from



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Canada, the customer of the Canadian company desiring to purchase such gas as may be delivered to it at the United States border must obtain authorizations from the Federal authorities in the United States permitting construction of the facilities to transmit gas to the communities to be served in the United States, construction of facilities at the United States border to take delivery of the gas and a permit to import gas into the United States.



Such a United States company is a natural gas company as defined in the Natural Gas Act of 1938 as amended, and is subject to the jurisdiction of the Federal Power Commission under that Act. The Federal Power Commission is empowered to grant to such a company a Certificate of Public Convenience and Necessity to engage in the transportation or sale of natural gas in inter-state commerce for resale for ultimate public consumption. In addition, under Section 3 of the Act, the Federal Power Commission is empowered to grant to a company desiring to import gas into the United States a permit to import the gas. The Federal Power Commission, acting as agent for the President of the United States, also is empowered to authorize the construction of the facilities at the international border through which such gas may be imported.

The Pacific Northwest, which is the customer of Westcoast in the United States, has obtained the above required certificates and permits.

THE CHAIRMAN: May I interrupt you, for a moment. For the benefit of the Commission, would you put on the record what regulations or statutory requirements there are in the Province of British Columbia which might apply?

MR. HETHERINGTON: There are no statutory requirements in the Province of British Columbia regarding the export of gas.



THE CHAIRMAN: Thank you.

MR. HETHERINGTON: Description of Pipeline Facilities (Peace River): Both West-coast and Pacific Northwest having obtained the authorizations mentioned above, on October 1, 1955, Westcoast commenced the construction of its gas transmission pipeline system, which it completed on October 1, 1957. The Westcoast pipeline connects the producing areas of the Peace River country in northeastern British Columbia and northwestern Alberta to markets in British Columbia and the pipeline system serving markets in the United States at a point on the international border between British Columbia and the State of Washington southeast of Vancouver.

The gas transmitted through the pipeline system from fields in northwestern Alberta, is purchased and gathered by Westcoast Transmission Company (Alberta) Ltd. a wholly-owned subsidiary of Westcoast, and is delivered under contract to Westcoast at a point on Westcoast Alberta's gathering system in Alberta approximately three miles east of the British Columbia border. Westcoast itself purchases and gathers gas from fields in northeastern British Columbia. The gathering system in operation consists of approximately 27 miles of line of varying diameters operated in Alberta by Westcoast Alberta, and approximately



89 miles of line of varying diameters operated by Westcoast in British Columbia.

The gathering systems are connected to Westcoast's main transmission facilities, consisting of approximately 650 miles of 30-inch diameter pipeline and 37 miles of 26-inch diameter pipeline, beginning at a point near Bonanza, Alberta, proceeding by Taylor, British Columbia generally southwest along the John Hart Highway to Prince George, and then south through the Fraser River valley to Williams Lake, from which it runs cross-country by Savona and Merritt to Hope, then to a terminus at the international border near Sumas, Washington and Huntingdon, British Columbia, where the line connects with facilities of B. C. Electric, which serves the metropolitan area of Vancouver, and the facilities of Pacific Northwest, which serves the States of Washington, Oregon, Idaho, Utah and Colorado.

The pipeline is powered by four compressor stations, spaced approximately 160 miles apart with an aggregate of 50,500 installed horsepower.

There is presently under construction an additional 84 miles of gathering system in British Columbia which will extend the gathering system to a point at about Mile 73 on the Alaska Highway, and provision has been made for the installation of additional compression of 2,000 horsepower. Upon completion of the installations the capacity of the



pipeline system will be 400,000 Mcf per day. The ultimate capacity of the main pipeline system with the installation of additional horsepower in four additional stations will be 660,000 Mcf per day of gas. This capacity can be further extended by a parallel pipeline on the same right-of-way as required to meet increasing market demands in the future.

The picture on page 30 is a picture of the Peace River crossing by two 26-inch diameter pipelines, with the McMahon gas processing plant in the background. This is the start of the Westcoast pipeline.

The plant that is shown in this picture is then described.

Description of Gas Scrubbing Plant: West-coast has constructed at a site on the north bank of the Peace River in the vicinity of Taylor, British Columbia, a gas scrubbing plant (I will refer to it as the "gas scrubbing plant"), which is processing the raw natural gas produced from gas fields north of the Peace River in British Columbia in order to make available dry specification pipeline gas for transmission and marketing and to recover raw hydrocarbons and sulphur by-products. The initial design capacity of the gas scrubbing plant is defined for contract purposes as being such as to process sufficient raw gas to produce 250,000 Mcf per day



of dry specification pipeline gas with raw products of not less than 10% of the propane, 55% of the butane, and essentially all of the liquid hydrocarbons contained in the raw gas delivered to the plant. The gas scrubbing plant has been constructed so that its capacity can ultimately be increased to process sufficient raw gas to produce 400,000 Mcf per day of dry specification pipeline gas.

With this end in view, it was determined that it would be more economical to install a portion of the equipment required for future expansion at the same time as installation of equipment for the initial gas available. For this reason the gas scrubbing plant as constructed can be expanded without curtailing plant operations which would otherwise require interruptions in the delivery of pipeline gas.

Capital Cost: The capital cost of all the pipeline, compression and processing facilities to be completed as of November 1, 1958, is summarized as follows:



Westcoast Transmission Company Limited:

Capital Cost -- Facilities to be completed
by Nov. 1, 1958

(Based on actual costs and commitments to
Jan. 1, 1958)

Main Pipeline

Land, Rights of Way and Damages	\$ 773,000	
Pipe and Installation	92,580,000	
River Crossings	4,544,000	
Meter and Regulator Stations	840,000	
Communications	256,000	
Miscellaneous Property	1,489,000	
Pipe and Installation	1,209,000	
Testing Equipment	267,000	
Initial Line Pack (gas)	<u>70,000</u>	
		\$102,028,000

Gathering System

Pipe and Installation	21,414,000
Compressor Stations	
Compressors and Installation	21,314,000
Gas Scrubbing Plant	
Building, Tanks, Processing Equipment and Installation	19,603,000
Housing Investment	
Processing Plant and Com- pressor Stations	1,958,000



Undistributed Costs

Corporate and Management	\$ 6,477,000	
Engineering and Supervision	9,232,000	
Interest During Construction	8,152,000	
Financing Costs	3,138,000	
Exchange Loss	<u>3,560,000</u>	<u>30,559,000</u>
Total		\$196,876,000
Less Interest Earned		<u>783,000</u>
Total Capital Cost		<u>\$196,093,000</u>

In order to provide housing accommodation for the employees for the pipeline and gas scrubbing plant operating personnel, Westcoast arranged for the erection of 136 housing units situated as follows:

Fort St. John, British Columbia	85 Units
Taylor Flats, British Columbia	9 Units
Fort McLeod, British Columbia	16 Units
Australian, British Columbia	12 Units
Savona, British Columbia	14 Units

This construction was carried out through the agency of Westcoast Transmission Housing Ltd., a wholly-owned subsidiary of Westcoast at a cost to the present time of \$2,346,981 including mortgage loans.

Westcoast Production Co. Ltd: Westcoast Production Co. Ltd. (a wholly-owned subsidiary of Westcoast) holds an interest in oil and gas properties comprised in 2,304,120 acres in northern Alberta and



northeastern British Columbia, equivalent to a net 561,931 acres on which there are completed 87 wells capable of production, including 6 oil wells and 81 gas wells. Westcoast Production is currently proceeding with active development of the properties held by it in northeastern British Columbia and northern Alberta. In addition, with its associates, Pacific Petroleum Ltd., Canadian Atlantic Oil Company Ltd., Phillips Petroleum Company and El Paso Natural Gas Company, Westcoast Production is participating in drilling exploratory wells in two structures in the foothills area of southern Alberta, namely, the Sullivan Creek field and Keystone field.

Gas Purchase Agreements: Approximately 65% of the gas initially contracted for purchase by Westcoast is covered by contracts with Pacific Petroleum Ltd. and its associated companies.

A description of the terms and conditions of the gas purchase agreements held by Westcoast is as follows.

Westcoast has four contracts for the purchase of natural gas with producers in British Columbia providing for the delivery of the following maximum daily amounts of gas:



(Volumes at 15.025 psia and 60° F.)

Period	Pacific Petroleum Ltd	Phillips Petroleum Company	J. B. White, A. M. Lloyd et alia	Gulf States Oil Company of Canada and El Paso Natural Gas Company
Beginning November 1, 1953 and con- tinuing during the term of con- tract (the life of the field) 230,000 Mcf(1)	--	--	--	--
January 1, 1959, to December 31, 1959	--	62,500 Mcf	30,000 Mcf	5,000 Mcf
January 1, 1960 and each year thereafter		62,500	50,000 (2)	5,000

Note:

- (1) Westcoast on 4 months' notice, has the option to increase the daily gas deliveries by 25,000 Mcf.
- (2) Westcoast, upon notice from the sellers that the gas is available, has the option to increase the daily gas deliveries at the rate of 1,000 Mcf, up to an additional total of 50,000 Mcf, for each 10,000,000 Mcf of proved recoverable reserves established for the lands contract in excess of 500,000,000 Mcf. In the event that Westcoast increases its sales to Pacific Northwest over 300,000 Mcf per day, the sellers may require Westcoast to exercise its option as aforesaid.

In that table, Mr. Chairman, there are certain provisions under which the deliveries can be



increased and otherwise related to the volume of gas reserves proved from time to time.

Westcoast Alberta has five contracts for the purchase of natural gas with producers in Alberta providing for the delivery to Westcoast Alberta of the following maximum daily amounts of gas:

(Volumes at 15.025 psia and 60° F.)

Period	Pacific Petroleums Ltd (1)	Pacific Pet- roleums and Westcoast Production Co. Ltd (2) (3)	Imperial Oil Limited (3)	Pathfinder Petroleums Limited	Royalite Oil Co. & Canadian Fina Oil Limited
January 1, 1958 to December 31, 1958	30,000 Mcf	20,000 Mcf	11,500 Mcf	2,500 Mcf	27,000 Mcf
Each year thereafter	30,000 Mcf	20,000 Mcf	15,700 Mcf	2,500 Mcf	40,000 Mcf

Notes:

- (1) By supplementary agreement dated April 21, 1955, Westcoast Alberta has an option to increase the daily gas deliveries up to December 31, 1960 by 30,000 Mcf.
- (2) By supplementary agreement dated April 21, 1955, Westcoast Alberta has an option to increase the daily gas deliveries up to December 31, 1960, by 10,000 Mcf.
- (3) Deliveries under this contract may be deferred, at the option of Westcoast, to November 1, 1960.



There again, there are certain provisions for increasing the takes from certain of the fields and, in those places, those provisions are in effect at this time.

THE CHAIRMAN: Thank you.

MR. HETHERINGTON: In addition to the above contracts, Westcoast Alberta has entered into contracts with Shell Oil Company and The British American Oil Company Limited, to the effect that Westcoast Alberta and the two respective producers will begin consultations prior to January 1, 1959 for the purpose of entering into gas purchase contracts with respect to the gas to be produced from certain lands in Alberta at prices to be mutually agreed upon, which shall not be less than a stated minimum. The gas under the respective producers' lands, except for any amount required for local distribution, is dedicated to these contracts until January 1, 1960, subject to the consummation of gas purchase contracts with such producers within the time specified in such contracts.

Westcoast Alberta has entered into a contract with Westcoast to deliver to Westcoast all of the gas it has contracted to purchase from producers in Alberta. Westcoast Alberta is financed, managed and operated by Westcoast and the price paid by Westcoast for the gas is an amount equivalent to the



contract price paid in each case by Westcoast Alberta to the producer plus an additional amount which will provide for the payment of all costs of Westcoast Alberta and provide it with a reasonable return on the investment in its pipeline facilities.

The various gas purchase contracts are generally similar in form, the producers being obligated to make delivery of the gas at a central point in each field, subject to the right to use such volumes of gas as may be required for production and development purposes. The contracts provide that the producers shall deliver a specified maximum daily volume of gas from the leases specified therein and that Westcoast or Westcoast Alberta, as the case may be, except in the case of the British Columbia acreage of Pacific Petroleum Ltd., will take delivery of a total volume in each year of a minimum of 263 times the maximum daily volume obligation in effect from time to time.

This amounts to a 72 per cent load factor guaranteed take.

In respect to all gas delivered by producers in Alberta and from points south of the Peace River in British Columbia, the gas delivered shall be dry pipeline gas free of hydrocarbons and sulphur as specified. In respect to gas delivered north of the Peace River in British Columbia, the gas shall be delivered to Westcoast in its raw state



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as produced except that the producer may extract hydrocarbons and liquids by mechanical separation where such processing will not reduce the liquid content of the gas below 0.5 gallons of pentane plus per Mcf.

The prices, which are to be paid under the contracts previously referred to for gas produced in Alberta and from fields south of the Peace River in British Columbia and for the residue gas at the outlet of the gas scrubbing plant in the case of gas delivered from fields north of the Peace River, are as follows:



Field Price Dry Pipeline Gas

Per Mcf
Cents

For the period following the first delivery of Gas to January 1, 1963	10 c
For the year 1963	10 1/4 c
For the year 1964	10 1/4 c
For the year 1965	10 1/2 c
For the year 1966	10 1/2 c
For the year 1967	10 3/4 c
For the year 1968	11 c
For the year 1969	11 1/4 c
For the year 1970	11 1/2 c
For the year 1971	11 3/4 c
For the year 1972	12 c
For the year 1973	12 c
For the year 1974	12 1/4 c
For the year 1975	12 1/2 c
For the year 1976	12 1/2 c
For the year 1977	12 1/2 c

provided that, for each month after commencement of deliveries hereunder and before November 1, 1963, during which the maximum billing demand billed to its customers by Buyer is less than an average of 460,000 Mcf per day, the said price shall be reduced as follows:



	Adjustment per Mcf Cents
Less than 460,000 but equal to or more than 425,000	1/2c
Less than 425,000 but equal to or more than 400,000	3/4c
Less than 400,000 but equal to or more than 375,000	1 3/4c
Less than 375,000 but equal to or more than 350,000	2 3/4c
Less than 350,000 but equal to or more than 325,000	3 1/4c
Less than 325,000 but equal to or more than 300,000	3 3/4c
Less than 300,000	4

Perhaps I should explain those tables.

The first table shows the scheduled base prices payable. The second table shows the volume adjustment. When the pipe line has a billing demand of less than 460,000 cubic feet a day the base price is reduced by the amount shown in the second table. As the volumes on the pipe line increase the net price to the producer increases, and after the volume on the pipeline reaches 460,000 cubic feet per day the tabulation of deductions is no longer applicable and the full base price is payable.

MR. STEER: You read that from the bottom up -- you start at the 4 cents at the bottom and you go up to the 1/2 cent at the top?

MR. HETHERINGTON: Yes, within each of the brackets of billing demands as shown.



On the basis of anticipated maximum firm gas sales of 400,000 Mcf per day by November 1, 1959 the price payable to producers will be 9 1/4 cents per Mcf.

All of the purchase contracts contain provisions to the effect that, if Westcoast or Westcoast Alberta should enter into any contract for the purchase of gas with a producer in the Peace River area of Alberta or British Columbia, as the case may be, containing terms more favorable to the producer than those contained in the existing contracts, the more favorable terms will become applicable to the existing contracts in each Province at the option of the producers in such Province.

The contracts contain provisions for adjusting the price to reflect changes in the rate of exchange between Canadian and United States funds below 95% or above 105%, as the case may be, and for increases in certain Canadian taxes on the producers. The contracts, with certain exceptions, provide that, at the expiration of the 20-year period, the price to be paid by the Westcoast or Westcoast Alberta, as the case may be, for natural gas is to be mutually agreed upon with the producers and in the event that no agreement shall be reached, the price in effect in the 20th year shall prevail, subject to the respective producers' rights to terminate their contracts upon six months' notice.



In the case of raw gas containing hydrocarbons and sulphur delivered from fields north of the Peace River, Westcoast will pay, as an additional component part of the price per Mcf of gas delivered, up to 40% of the sales value of liquid petroleum gases, natural gasoline and sulphur recovered in the gas scrubbing plant, calculated in respect to each delivery point as follows:

By-Products Price Schedule

The portion of the price per Mcf based on the by-products shall be the total of the component prices per Mcf for pentanes plus, LPG, sulphur and other material extracted and sold, determined for each delivery point as follows:

- (a) The component price for pentanes plus per Mcf of gas delivered obtained by multiplying the GPM (gallons per million cubic feet) of pentanes plus by the adjustment for actual monthly plant production as hereinafter defined, by the applicable percentage set forth in Subsection (e) of this Section 2 and by the average price for pentanes plus being received by buyer f.o.b. its gas processing plant. The adjustment for actual monthly plant production hereinbefore mentioned shall be a fraction, the numerator of which shall be the actual net plant production of pentanes



plus during the month and the denominator of which shall be the sum of the pentanes plus contained in the gas delivered by all sellers during the month.

- (b) The component price of LPG (Liquefied Petroleum Gas) per Mcf of gas delivered obtained by multiplying the GPM of LPG by the adjustment for actual monthly plant production as hereinafter defined, by the applicable percentage set forth in subsection (e) of this Section 2 and by the average price for LPG being received by buyer, f.o.b. its gas processing plant. The adjustment for actual monthly plant production as hereinbefore mentioned shall be a fraction, the numerator of which shall be the actual net plant production of LPG during the month and the denominator of which shall be the sum of the LPG contained in the gas delivered by all sellers during the month.
- (c) The component price for sulphur per Mcf of gas delivered obtained by multiplying the LPM (Pounds per Mcf) of sulphur by the adjustment for actual monthly plant production as hereinafter defined, by the applicable percentage set forth in subsection (e) of this Section 2, and by



the average price for sulphur being received by buyer, f.o.b. its gas processing plant. The adjustment for actual monthly plant production hereinbefore mentioned shall be a fraction, the numerator of which shall be the actual net plant production of sulphur during the month and the denominator of which shall be the sum of the sulphur contained in the gas delivered by all sellers during the month.

- (d) The component price for other materials extracted and sold per Mcf of gas delivered shall be determined in a manner comparable with the provisions of subsections (a), (b) and (c) of this Section 2.
- (e) The applicable percentage to be employed in subsections (a), (b), (c) and (d) of this Section 2 for the gas delivered hereunder at each delivery point shall be as follows:

	Applicable Percentage
GMP of Pentanes in Gas	
Less than 0.25	-0
Equal to 0.25 but less than 0.50	37%
Equal to 0.50 but less than 0.75	38%
Equal to 0.75 but less than 1.00	39%
Equal to or more than 1.00	40%

provided, however, notwithstanding anything hereinbefore



set forth in this Article VI, the buyer specifically reserves the right to renegotiate an equitable charge for processing raw gas delivered at any delivery point which has a GPM of pentanes plus less than 0.25 and failing agreement, to discontinue accepting raw gas at such delivery point.

That is taken right out of our contract. It is very technical and boring, but the net effect is that the producer in addition to receiving the base price per Mcf for residue gas out of the plant receives up to 40 per cent of the revenue obtained from the sale of the by-products extracted from the gas associated with the residue that he has sold.

THE CHAIRMAN: Yes.

MR. HETHERINGTON: Westcoast has provided for the sale of the hydrocarbons and sulphur recovered in the gas scrubbing plant in accordance with arrangements as hereinafter described.

Hydrocarbon Sales Agreement: Westcoast has entered into an agreement (the "Hydrocarbon By-Product Purchase Agreement") with Pacific Petroleum Ltd ("Pacific") and Phillips Petroleum Company ("Phillips") whereby Pacific and Phillips will purchase the entire production of liquefied petroleum gas (LPG) and liquid hydrocarbons from the gas scrubbing plant.

The term of the Hydrocarbon By-Product Purchase Agreement is for an initial period ending



at the expiration of the twentieth year following the year in which the first delivery of raw by-products shall be made by Westcoast, and will continue in effect thereafter from year to year until terminated on eighteen months' notice by either party to the other. The contract provides that Pacific and Phillips will pay 35c per barrel for mixed propane and butane and \$3.25 per barrel for liquid hydrocarbons for a period ending with the expiration of the fifth year of the aforementioned twenty-year period, and thereafter Pacific and Phillips will pay for each succeeding five-year period such prices as shall be mutually agreed upon by the parties, and, in the absence of such mutual agreement, the prices to be paid shall be the prices in effect for the preceding five-year period.

Pacific and Phillips are jointly constructing and will own and operate the refining plant at a site adjacent to the gas scrubbing plant for the purpose of processing the hydrocarbon by-products purchased from Westcoast into marketable products, including finished propane, butane, gasolines, diesel fuel and other liquid distillates. Pacific and Phillips are actively engaged in marketing petroleum products in the area which can be served from the refining plant site.

Acid Gas Sales Agreement: Under an agreement between Westcoast and Jefferson Lake



Sulphur Company ("Jefferson Lake") Westcoast has agreed to sell to Jefferson Lake the production of acid gas (for the manufacture of sulphur) from the gas scrubbing plant.

Jefferson Lake has constructed, in proximity to the gas scrubbing plant, a plant for processing acid gas for the production therefrom of elemental sulphur. The sulphur plant has an initial daily design capacity of 300 long tons of sulphur, and Jefferson Lake has agreed that, as the supply of acid gas from the gas scrubbing plant is increased in increments to yield at least an additional 100 long tons of sulphur per day, the capacity of the plant will be correspondingly expanded, on notice from Westcoast to a maximum productive capacity of not exceeding 600 long tons per day.

Westcoast has agreed, until December 31, 1959, to use its best efforts to process not less than 226,000 Mcf per day of gas producing an acid gas stream from which 290 long tons of sulphur per day can be produced by Jefferson Lake and, after December 31, 1959, to process additional volumes of gas sufficient to enable Jefferson Lake to produce in excess of 300 long tons of sulphur per day.

The parties have agreed that all acid gas produced by the gas scrubbing plant up to the actual capacity of the sulphur plant shall be made available to Jefferson Lake and that Jefferson Lake



shall accept and pay for all such acid gas made available to it, except that Jefferson Lake shall not be obligated to pay for acid gas, in excess of the initial design production capacity of its plant which it is unable to process at any given time.

Westcoast has agreed to give Jefferson Lake the right of first refusal to purchase, on terms no less favorable to Westcoast than it can otherwise obtain, all acid gas produced by the gas scrubbing plant in excess of the volumes contracted for.

The price of acid gas, delivered to Jefferson Lake, is expressed in sulphur equivalent and is based on a formula related to daily average production of sulphur and the average sales price per long ton received during the preceding quarter by Jefferson Lake, f.o.b. its plant, less freight, all allowances and local sales taxes. The price payable per long ton of calendar monthly quantity of sulphur (daily average production or equivalent, multiplied by the number of days in the month) for each quarter shall be the base price given below opposite the corresponding daily average production or equivalent, adjusted in direct ratio to variations, from \$20.50 per long ton, in the net-sales-sulphur-price f.o.b. plant for such quarter. One-half of the excess over, or deficiency below, \$20.50 per long ton, shall be added to, or subtracted from, the base price, as



the case may be, provided that the net-sales-sulphur-price f.o.b. plant is never to be less than \$16.50 per long ton.

Price Table

<u>Daily Average Production or Equivalent (Long Tons)</u>	<u>Base Price Per Long Ton</u>
159.9 and under	\$ 4.95
160 to 169.9	5.37
170 to 179.9	5.79
180 to 189.9	6.21
190 to 199.9	6.63
200 to 209.9	7.05
210 to 219.9	7.47
220 to 229.9	7.89
230 to 239.9	8.31
240 to 249.9	8.73
250 to 259.9	9.15
260 to 269.9	9.57
270 to 279.9	9.75
280 and over	10.00

That table simply says that for tonnages less than 159.9 tons per day the price is \$4.95 -- the base price -- and for tonnages over 280 tons per day the base price is \$10 per ton, and the base price is subject to either an increase or a reduction depending on the sale prices of sulphur f.o.b. the plant either above or below \$20.50 per ton.



After ten years, Westcoast has the option to continue the aforementioned price arrangement formula or, at its option, to receive thereafter one-half of the operating earnings of Jefferson Lake realized from sulphur produced or products recovered from acid gas furnished by Westcoast under the agreement.

The agreement is for a primary term of twenty years, subject to extension for fixed periods in the event that Jefferson Lake shall be required to increase its plant capacity as described above, and thereafter the agreement shall continue in force from year to year subject to termination at the election of either party.

Gas Sales Agreements - General: Westcoast has entered into contracts for the sale of the natural gas transported over its pipeline to three customers, Inland Natural Gas Co. Ltd (Inland), British Columbia Electric Company Limited (B.C. Electric), and Pacific Northwest Pipeline Corporation (Pacific Northwest).

Inland has constructed and is presently operating transmission and distribution facilities required to make gas available to the British Columbia communities of Quesnel, Williams Lake, 100 Mile House, Merritt, Kamloops, North Kamloops, Vernon, Salmon Arm, Enderby, Armstrong, Kelowna, Glenmore, Penticton, Summerland, Oliver, Osoyoos, Grand Forks, Rossland, Trail, Tadanac, Castlegar,



Kinnaird and Nelson in the Okanagan Valley and West Kootenay districts of the Province of British Columbia.

B. C. Electric has distributed manufactured gas in the lower mainland area of British Columbia for many years, the principal market being in metropolitan Vancouver. In November 1956 through a connection at the international border near Huntgindon, British Columbia, B. C. Electric was able to take delivery of natural gas made available from Pacific Northwest, and constructed new facilities and converted its manufactured gas facilities for the use of natural gas. Upon gas being made available at Huntingdon from the Westcoast pipeline system on October 1, 1957, the interim supply of gas from Pacific Northwest was terminated.

Pacific Northwest, in October 1956, completed the construction of a natural gas pipeline from the San Juan Basin area of New Mexico and Colorado to the international border at Sumas, Washington, adjacent to Huntingdon, British Columbia, and is now transmitting gas to communities in the States of Colorado, Utah, Wyoming, Idaho, Oregon and Washington, making use of gas provided from sources in the San Juan Basin and from gas delivered to its facilities by Westcoast at Sumas, Washington.

The following is a summary of the maximum



daily quantities of gas which (subject to certain options to increase, described below) Westcoast may be obligated to deliver to the respective purchasers during the twenty-year period covered by the contracts:

(Volumes 14.73 psia and 60° F.)

	Inland	B.C. Electric	Pacific Northwest
First Period	28,000 Mcf(1)	40,000 Mcf(1)	203,308 Mcf(2)
Second Period	36,000 Mcf(3)	50,000 Mcf(3)	252,885 Mcf(4)
Third Period	43,000 Mcf(5)	50,000 Mcf(5)	303,462 Mcf(6)

-
- (1) Prior to November 1, 1958.
 - (2) Prior to January 1, 1958.
 - (3) Year ending November 1, 1959.
 - (4) Year ending December 31, 1958.
 - (5) Year ending November 1, 1960, and each year ending November 1, 1977.
 - (6) Year ending December 31, 1959, and each year thereafter to and including the year ending December 31, 1977.

Inland has agreed to pay the demand rate on a daily minimum of 24,000 Mcf during the second period and 29,500 Mcf during the third period but no daily minimum is provided for the first period. Pacific Northwest has agreed to pay the demand rate on the full amount of the maximum gas deliverable to it in each of the three periods referred to in



the table above, but has reserved the right to reduce these quantities by 50,000 Mcf per day until January 1, 1960, but not thereafter, B.C. Electric has not agreed to pay the demand rate on any daily minimum quantities of gas, but has advised the Company that it anticipates that it will require, during the first and second periods, approximately 42,000 Mcf daily and, during the third period, approximately 58,000 Mcf daily.

In its contracts with Inland and B.C. Electric, Westcoast has agreed not to supply gas to any other person for consumption or resale in the areas served by these companies unless it is required to do so by valid order of any public regulatory authority having jurisdiction, or, unless, after notice, Inland or B.C. Electric, as the case might be, should fail to supply any bona fide purchaser on reasonable terms.

Gas Sales Agreement -- Inland Natural Gas Co. Ltd: Gas is sold by Westcoast to Inland under the terms of two service agreements. The first Inland agreement, covering sales to communities in the interior of British Columbia other than the West Kootenay district (the "Inland Agreement"), as amended, permits Inland, at any time prior to November 1, 1959, on 12 months' notice, to increase the daily maximum amount of gas which Westcoast must stand ready to deliver to it, up to,



but not in excess of, a total of 32,000 Mcf. Provision is also made for further increases thereafter, up to an aggregate of 16,000 Mcf additional, in the event that the proven and recoverable reserves available to Westcoast and its pipeline facilities are adequate and the demand obligations of Westcoast's other purchasers are adequately provided for. The price of the gas to be delivered to Inland under both agreements is the aggregate of a commodity charge of 20c per Mcf and a demand charge of \$3.21 per Mcf of the monthly billing demand. The billing demand for any period is to be ascertained by determining the greater of (1) the largest amount of firm gas (as defined in the agreement) delivered to Inland on any day during the 12 months ended with the period or (2) the daily minimum amount of gas agreed to be purchased. The agreements provide that the total of the commodity charge and the demand charge shall not exceed 47c per Mcf prior to November 1, 1958. At a 75% load factor, the price would be 34.1c per Mcf. Gas may also be delivered and purchased on an interruptible basis, subject to curtailment by Westcoast. The price to be paid for such interruptible gas is 22c per Mcf gas delivered in excess of the billing demand for the day of delivery.



In addition to delivery through Westcoast's own facilities at various points on Westcoast's main line, gas is being delivered, up until May 1, 1961, by Westcoast to Inland, through facilities constructed by Inland, at several delivery points from the vicinity of Savona south to Penticton. Westcoast will compensate Inland during this period for the use of its facilities by payment of a monthly sum equivalent to 1.25% of the book cost of such facilities less depreciation, the said sum in no event to exceed \$41,667 per month. After May 1, 1961, gas under the Inland Agreement will be delivered to Inland at one delivery point near Savona and Inland will bear the full cost of delivery to the points south from Savona to Penticton of all gas purchased by it under the Agreement.

The Inland agreement, covering the sale of gas for distribution in the West Kootenay district (the "Inland West Kootenay Agreement") provides that Inland may, on 12 months' notice, increase the daily maximum amount of gas to be delivered by Westcoast 11,000 Mcf per day up to 21,500 Mcf of gas per day. Westcoast agrees to deliver the gas for distribution in the West Kootenay district at a point on the Inland pipeline system south of the city of Penticton. Inland will make available its pipeline connecting Penticton and Westcoast's main line at a point near Savona in consideration of a rental



payment calculated at the rate of \$1.15 per Mcf of the monthly billing demand of all volumes of gas transmitted from Penticton to the West Kootenay District.

It will be noted that the above contracts with Inland both contain provision for substantial payment by Westcoast to Inland on account of the carrying charges and capital expenditures incurred by Inland in constructing its distribution facilities from the connection thereof with the Westcoast main line at Savona to the terminus at Nelson.

The contribution by Westcoast towards the cost of these facilities is contained in the rental payment to be made under the Inland Agreement at the rate of \$500,000 for $3\frac{1}{2}$ years, that is \$500,000 a year for $3\frac{1}{2}$ years - a total contribution of \$1,750,000. This contribution is made to Inland by way of rental payment for the express purpose of assisting Inland in carrying the investment in its main line facilities from Savona to Penticton during the initial years of operation prior to Inland building up its market in the communities served by the pipeline from Savona to Penticton to their full capacity estimated to be obtained on January 1, 1961.

Under the Inland West Kootenay Agreement, Inland undertook the building of its main distribution line from Penticton to Nelson so as to provide a service to the West Kootenay area in which are



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a service to the West Kootenay area in which are situated the populous cities of Rossland, Trail and Nelson, whose economy is based on the operation of the Consolidated Mining & Smelting Company plant at Trail, one of the largest non-ferrous smelting and refining plants in the world, with which is operated a substantial fertilizer and chemical division making use of by-products from non-ferrous metals treated.

The contribution of Westcoast to the operation of this pipe line is the reduction in the demand rate for gas transmitted through the pipe line of \$1.15 per Mcf based on maximum firm sales in each month for the term of 20 years from the date of first delivery

As a result of the policy adopted by Westcoast in providing the rental payments, which are applied by Inland against the capital cost investment of the facilities constructed by it, gas has been made available at an economic price not exceeding the price charged for gas distributed in other areas in British Columbia south of the Peace River area. The number of communities eventually to be served will be 37 communities. Gas service to these communities will be useful in maintaining the economy of the fruit and vegetable industries carried on in the Okanagan area and will also be available to the mining, smelting and forestry industries in the West Kootenay area



Inland has not only provided a gas transmission system plus a gas distribution system serving the residents and industry of the communities above mentioned in British Columbia, but its facilities also serve to supply gas to 5 of the electrical generation plants of the British Columbia Power Commission situated at the communities of Prince George, Guesnel, Williams Lake, 100 Mile House and Kamloops. The gas is provided at a very substantial saving from the cost of oil. This savings is reflected in the rate for electrical energy charged to each of the communities served.

Gas Sales Agreement - British Columbia Electric Company: Gas will be sold to B. C. Electric under three contracts, namely, the principal service agreement as amended, a guaranteed interruptible contract, and a thermal plant agreement.

The principal service agreement permits B. C. Electric, at any time prior to November 1, 1959 and on 12 months' notice, to increase the daily maximum amount of gas which Westcoast must stand ready to deliver to it, up to 50,000 Mcf per day. At any time after B. C. Electric's purchases have reached a maximum of 5,000 Mcf of gas per day, B. C. Electric may, upon not less than 10 months' notice expiring on November 1 in any year, increase the daily maximum amount of gas to be delivered to



it up to, but not exceeding 130,000 Mcf

The price to be paid for the gas to be delivered to B. C. Electric under the principal service agreement is the same as that provided for in the Inland contracts and is computed in the same manner, except that the billing demand for any day or month shall be the greater only of (1) the greatest quantity of firm gas delivered on any day during the 12 months ending with such month, or (2) 90% of the greatest previous billing demand. If B. C. Electric shall exercise its right to increase the demand obligations and if the aggregate demand obligations of all of Westcoast's purchasers shall then exceed 520,000 Mcf of gas per day, the gas delivered to B. C. Electric shall, to the extent that it causes the aggregate demand obligations to exceed 520,000 Mcf, be billed at a commodity charge rate of 21.2c per Mcf rather than 20c per Mcf. Interruptible gas is priced on the same basis as in the Inland Agreement and the agreement contains the same price limitation until November 1, 1958.

The guaranteed interruptible contract provides that on or before May 1, 1957 and January 1 in each of the calendar years 1958 to 1961, B. C. Electric will advise the Company of its peak day requirements for firm gas and interruptible gas,



respectively, under the principal service agreement for the year starting on the first day of November following. The Company agrees to hold available for delivery to B. C. Electric up to an aggregate of 57,500 Mcf of gas per day for a minimum number of 325 days in each of the years beginning November 1, 1957, November 1, 1958 and November 1, 1959 and a minimum number of 265 days and 250 days, respectively, in the years beginning November 1, 1960 and November 1, 1961.

The thermal plant agreement provides that before July 1, 1958 B. C. Electric will advise Westcoast specifying the maximum volume of natural gas per day to be used in a thermal power plant it intends to construct in the vicinity of Vancouver, which it wishes Westcoast to supply to it on a date which shall be the first day of any of the first seven months in the year 1961. The volumes so specified shall be 24,000 Mcf or any multiple thereof up to 144,000 Mcf. After the first notice, B. C. Electric may give Westcoast further notices specifying a day which shall be the first day of a month and shall not be earlier than three calendar years after the giving of each such notice on which B. C. Electric desires the maximum daily volume of gas to be supplied to it by Westcoast to be increased to a volume therein specified which is a multiple of 24,000 Mcf and not exceeding 144,000 Mcf in the aggregate. The volume so specified shall



be the contract demand in force and the delivery of gas up to the volume of such contract demand shall not be subject to interruption and shall have priority over all deliveries made by Westcoast on an interruptible basis. The price, subject to certain adjustments, shall be the demand charge of \$3.21 per Mcf of contract demand not exceeding 96,000 Mcf, and a commodity charge of 20c per Mcf. The price to be paid with respect to gas delivered in excess of 96,000 Mcf up to 144,000 Mcf is not fixed by the contract. The term of the contract is 20 years from the date of first deliveries of gas under the contract.

Gas Sales Agreement - Pacific Northwest Pipeline Corporation: The agreement between Westcoast and Pacific Northwest provides that the price to be paid by the latter for gas to be purchased from Westcoast is to be 22 $\frac{1}{4}$ c per Mcf until January 1, 1959 and 22c per Mcf thereafter for the balance of the term of the contract, such prices being based upon the application of demand and commodity rates at a 90% load factor. Pacific Northwest agrees to pay to Westcoast a minimum annual bill in an amount equal to 90% of the revenues which would have resulted from the demand and commodity rates above described on a 100% load factor applied to the volumes Westcoast is obligated to deliver. Pacific Northwest also has the right under the contract to purchase from Westcoast under the same



terms and conditions the next 100,000 Mcf per day which Westcoast has available for delivery and sale over and above Pacific Northwest's contract demand and the requirements of Westcoast's markets in Canada, subject to the grant of required governmental authorizations in Canada and the United States to both Westcoast and Pacific Northwest.

Recently there has been comment in the press and in Parliament with respect to the price charged by Westcoast for gas sold at the International Border for consumption in the United States, namely 22c on the basis of 90% load factor. This price is contrasted to the rate charged by Westcoast for gas delivered into the facilities of the distributing companies in British Columbia, namely, B. C. Electric and Inland, which is at a rate equivalent to 32c per Mcf at 90% load factor basis.

Reference has been made to the regulations under the Export and Importation of Gas Act which provide that the price charged by the holder of an Export License for gas exported by it shall not be lower than the price at which gas is supplied by it in similar quantities and under similar conditions of sale for consumption in Canada.

The gas delivered to Pacific Northwest is not supplied in similar quantities nor under similar conditions to that supplied for consumption in Canada.



The Pacific Northwest contract provides for the sale of 300,000 Mcf per day at a 90% load factor for which Pacific Northwest must pay whether taken or not. The B. C. Electric contract, on the other hand, does not require that B. C. Electric take any particular volume of gas and they need not pay for any gas not taken. The B. C. Electric contract was originally negotiated on the then estimate that B. C. Electric would require about 40,000 Mcf per day at the end of a five-year period (approximately 13% of the contract obligation of Pacific Northwest).

The sale of gas to B. C. Electric is at the point of consumption, whereas the sale of gas to Pacific Northwest is at the International Border where there are no consumers, the major points of consumption being far to the south.

No community in the Pacific Northwest States is receiving natural gas at a lower city gate rate than Vancouver. The city rates at the boundaries of Seattle, Portland and other areas in the Pacific Northwest States were originally the same as for the Vancouver area. However, Pacific Northwest has made application to the Federal Power Commission for, and has put into effect, an increase in rates of 17% which has increased the city gate rates payable by the United States communities from 32c, to 37.4c. Pacific Northwest is free to apply for further increases as its costs



increase from year to year.

Without the sale of 300,000,000 feet per day by Westcoast at the border, Westcoast could not have built a pipeline from the Peace River area and delivered gas at Vancouver under a rate of about \$2.00 per Mcf.

If the Peace River gas were not available for Vancouver from the present Westcoast system, Vancouver's only recourse would have been to obtain gas from the Pacific Northwest Company at the same rate it is now paying Westcoast plus the 17% increase now in effect, plus any additional increase which Pacific Northwest Company would charge in the future, plus the import duty on gas currently fixed at 3¢ per Mcf.

The facts are that Westcoast negotiated the best price possible at the border in 1954 based on fuel oil competition and the competition of supplies of gas from the United States sources. Westcoast adopted the city gate rate of competitive United States gas at Vancouver which initially was based on fuel oil competition at Portland, despite the fact that all costs of fuels in Vancouver were much higher than in Portland at the time the rates were fixed.

B.C. Electric, after full investigation entered into its 20-year contract in order to ensure a firm supply for all of its requirements for 20 years from Westcoast.



The negotiating of the 22¢ price at the border by Westcoast was fully publicized in December, 1954, again fully disclosed before the Oil and Gas Conservation Board of Alberta in March 1955, again fully discussed before The Board of Transport Commissioners in June, 1955 and full information furnished to the Department of Trade and Commerce upon the application for the export licence. As a result of the contract fixing the 22¢ price for the sale of 300,000 Mcf per day Westcoast has supplied gas to communities in British Columbia at a price much less than could be obtained otherwise, and it has completed its project without any subsidy or cost to the people of Canada with benefit to thousands of residents in British Columbia and has provided British Columbia and Northern Alberta with a natural gas industry.

Section 6 deals with potential sales of gas, 1958 to 1962 inclusive. Westcoast estimates that the demand for gas in the markets presently served by the Westcoast Peace River pipeline system and the proposed pipeline to be constructed from Southern Alberta to the international border at Kingsgate, British Columbia, for the years 1958 to 1962 inclusive, are as follows:

MR. PATTILLO: I think we can take this as read, but would you read in the total annual volume?



MR. HETHERINGTON: Yes, in 1958 we expect to have a peak day of 315,005 MCF with an annual sale of 101,043 MMCF.

Then in 1959 we expect to have annual sales -- when I say we expect, these are the potential sales providing we supply all this market that is available to us -- 125,133 MMCF. 1960, 266,135 MMCF. 1961, 321,346 MMCF. 1962, 370,989 MMCF.

This table shows the growth of the British Columbia market from 62 MCF in 1958 to 231,353 MCF in 1962, and shows the present operative sales of Pacific Northwest of 252,000 MCF to an increase in 1959 of 303,000 MCF per day.

MR. PATTILLO: When do these figures incorporate your proposed new extension in 1960?

MR. HETHERINGTON: We show the additional market of the Pacific Northwest Pipeline Corporation, future, 404,616 MCF per day. We show an increase each year thereafter of 100,000 MCF per day.

Those are the assessments of the potential market available to us.

(Table on page



Potential Sales of Natural Gas
Westcoast Transmission Company Limited
Years 1958 to 1962 inclusive

	<u>1958</u>	<u>1959</u>	<u>1960</u>
Maximum Day Sales (Mcf @ 14.73 Psia)	- - - - -	MCF - - - - -	- - - - -
British Columbia Mar- kets	62,120	90,076	111,976
Pacific Northwest Pipeline Corp.			
Presently authorized	252,885	303,462	303,462
Future	-	-	404,616
	<hr/>	<hr/>	<hr/>
Total Pacific North- west	252,885	303,462	708,078
	<hr/>	<hr/>	<hr/>
Total Maximum Day	315,005	393,538	820,054
	<hr/>	<hr/>	<hr/>
Annual Volumes (MMcf @ 14.73 Psia)	-----	MMCF - - - - -	-----
British Columbia Markets	17,970	25,446	33,532
Pacific Northwest Pipeline Corp.			
Presently authorized	83,073	99,687	99,687
Future	-	-	132,916
	<hr/>	<hr/>	<hr/>
Total Pacific North- west	83,073	99,687	232,603
	<hr/>	<hr/>	<hr/>
Total Annual Volumes	101,043	125,133	266,135

(cont'd on page 1021)



Potential Sales of Natural Gas (cont'd)

	1961	1962
Maximum Day Sales (Mcf @ 14.73 Psia)	- - -	-MCF - - -
British Columbia Markets	183,444	231,353
Pacific Northwest Pipeline Corp.		
Presently authorized	303,462	303,462
Future	505,770	606,924
Total Pacific Northwest	809,232	910,386
Total Maximum Day	992,676	1,141,739
Annual Volumes (MMcf @ 14.73 Psia)	- - -	- MMCF - - -
British Columbia Market	55,514	71,927
Pacific Northwest Pipeline Corp.		
Presently authorized	99,687	99,687
Future	166,145	199,375
Total Pacific Northwest	265,832	299,062
Total Annual Volumes	321,346	370,989

These estimates are based upon Westcoast's appraisal of the information furnished to Westcoast by its customers in British Columbia, Pacific Northwest Pipeline Corporation and El Paso Natural Gas Company.

MR. FRAWLEY: Mr. Hetherington, why do you refer to El Paso? I understand you only have a contract with Pacific Northwest.



MR. HETHERINGTON: That is correct. The actual information was given to us by Mr. Paul Kayser, who is a chief executive officer of both companies, so we let them put in Northwest also.

MR. FRAWLEY: You have mentioned Pacific Northwest.

MR. HETHERINGTON: The amount of gas Pacific Northwest can use depends on how much El Paso can use. We hope to go beyond El Paso.

MR. FRAWLEY: But to you that is just the requirement of Pacific Northwest?

MR. HETHERINGTON: But to satisfy the requirements we had to look into El Paso requirements.

THE CHAIRMAN: I think, Mr. Hetherington, we had better give you a rest for a luncheon period. We will adjourn now and resume the hearing at 2.00 o'clock.

---Whereupon the hearing adjourned at 12.10 P.M.
to resume at 2.00 P.M.

- - - -



---Upon resuming at 2.00 P.M.

THE CHAIRMAN: Gentlemen, we shall resume the hearing. Mr. Hetherington, shall we continue?

MR. HETHERINGTON: Mr. Chairman, I was at Part 7, competitive factors affecting gas price and markets.

Instead of presenting a theoretical discussion of competitive factors affecting the gas price and markets, it is felt that a statement of the actual competitive factors encountered by the officials of Westcoast in negotiating the contracts for sale of the gas transmitted through the Westcoast pipeline would be of more value.

Immediately following the authorization of Westcoast to export gas from Canada in June, 1952, Pacific Northwest completed its plan to purchase gas supplies in the Four Corners area of New Mexico, Colorado, Utah and Wyoming and made application to the Federal Power Commission for authority to build a pipeline from the San Juan Basin to Seattle and serve the market which Westcoast planned to serve through its subsidiary, Westcoast Transmission Company, Inc.

This application was consolidated with the application of Westcoast Transmission Company, Inc., and the joint hearing of the applications proceeded before the Federal Power Commission from June,



1952 to April, 1954. On June 20, 1954, the Federal Power Commission approved the application of Pacific Northwest and dismissed the application of Westcoast Transmission Company, Inc. One of the reasons advanced for the dismissal of the application was that the Commission did not think it in the public interest to authorize a project which would be dependant wholly upon gas supplies originating in Canada. On the other hand, the Commission pointed out that the use of Canadian gas as a supplementary source of supply was highly desirable.

Westcoast Transmission Company, Inc. appealed the decision of the Commission to the United States Court of Appeals, and immediately commenced negotiations to sell the gas which it had available in the California market, by-passing the market in Washington, Oregon and Idaho which had been allocated to the Pacific Northwest.

After extended negotiations with the distributing companies in California, and later with the officials of the El Paso (the supplier of gas to the California Gas Companies), and the officials of Pacific Northwest, it was determined that the economic value of Canadian gas delivered at San Francisco was approximately 34¢ per Mcf on the basis of a 90% load factor. This value was established in San Francisco by the delivered cost of gas at San Francisco from Texas and Arizona and



and the competitive value of Bunker fuel oil available for industrial purposes in the San Francisco Bay area.

Since the demand for gas which created the market for Canadian gas was in the State of California the price of gas exported from Canada necessarily reflected the cost of moving the gas from the international border through the facilities of Pacific Northwest plus the cost of moving the gas from a point on the Pacific Northwest pipeline near Boise, Idaho, through a proposed pipeline to be built by El Paso from Boise, Idaho, to the vicinity of San Francisco. The charge established for the use of the facilities of Pacific Northwest was 3¢ per Mcf. The cost of delivering the gas from Boise, Idaho, to a point in the vicinity of San Francisco was estimated at 9¢ per Mcf. As a result, since the competitive value of gas transmitted from Texas and Arizona fields to San Francisco was 34¢ per Mcf, the net value of Canadian gas at the international border, was 34¢ less 12¢, namely 22¢ per Mcf.

In the gas sales agreements between West-coast and Inland and B.C. Electric for the supplies of gas to Canadian consumers the rate fixed was the same rate at which gas was available at the city gates of Seattle, Portland and Spokane in the adjoining States of Washington and Oregon. This



was the competitive value of gas at Vancouver because of the agreement of Pacific Northwest that it would supply Vancouver with gas at the above rates from its United States sources. This rate was less than the then competitive rate for fuel oil at Vancouver. It was far less than any rate based on the transportation of Peace River gas to serve Vancouver and the British Columbia markets alone.

On the basis of the 22¢ price at the international border and the rates fixed for delivery of gas in British Columbia, the officials of Westcoast were able to negotiate the purchase of gas from the producers in the field and fix the gathered price in the field.

These gas sales agreements and gas purchase agreements had to be completed before the economic studies could be made on which the financing of the pipeline project was based.

These agreements also were required to assure the consumer in the United States of supplies of gas for at least 20 years upon terms and conditions including price which would meet the approval of the Federal Power Commission. The agreement for sale of gas at the international border was a main factor whereby the management of the insurance companies of the United States (who were destined to provide the greater proportion of the investment



in the facilities to be constructed) could recommend to their financial committees investment in Westcoast securities based solely on the merits of the proposal with respect to gas reserves and markets without the help of any government subsidy or the guarantees of international oil companies.

It will be remembered that in both the cases of the Interprovincial Pipe Lines and Trans-Mountain Oil Pipe Lines the first mortgage bonds are secured by the guarantee of the world's larger oil companies. In the case of Trans-Canada Pipe Line substantial aid of the government of Canada was required before the Trans-Canada venture obtained the approval of the investment committees of the insurance companies in the United States.

Following completion of the contract with Pacific Northwest in December, 1954, rapid progress was made. By March, 1955 gas purchase contracts, sales contracts with distributors in British Columbia, and the economic studies, were completed. By June, hearings before the Board of Transport Commissioners were completed, and an export licence obtained, and Pacific Northwest was enabled to proceed with its application to the Federal Power Commission.

Proceedings before the Federal Power Commission were completed in October and on November 28th, a Certificate of Convenience and Necessity



was issued by the Federal Power Commission to Pacific Northwest.

It may be observed that apart from the fact that gas must compete with other fuels, the customer in the United States requires reasonable assurances of a continued supply of gas over a period of time sufficient to provide for the amortization of the investment in the facilities installed to use Canadian gas by the transmission companies, the distribution companies and the industrial and domestic consumers. Accordingly, the less new capital expenditure required to be made in market and use facilities in the United States, the more flexible terms of the delivery that may be required by the United States customer. A customer which has invested a minimum of capital in new facilities to transmit Canadian gas is more able to restrict its requirements to volumes which are currently surplus to Canadian requirements based on taking delivery of fluctuating volumes when required to satisfy peak day demands of customers in Canada as the same should occur from time to time.

The arrangement which Westcoast has been able to make with Pacific Northwest in connection with proposed deliveries of gas from Alberta sources at the international border near Kingsgate,



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British Columbia, is made possible by the limited investment by Pacific Northwest in new facilities and the ability of Pacific Northwest to fit its requirements to the peak day demands of Alberta consumers.



A.A.

Cost Of Transportation: In

describing the proposed Westcoast project to transport gas from southern and central Alberta to the Pacific Coastal States through southeastern British Columbia, under Section 9, Westcoast has submitted its estimates of the cost of construction of the proposed pipeline facilities and plant together with an estimate of the operating costs of the pipeline facilities and the plants. The details are set out in Exhibit B.

MR. HELMAN: Where do I find Exhibit B?

MR. HETHERINGTON: It is the green-bound book.

A discussion of the cost of transportation requires an understanding of the meaning of "cost" when applied to the movement of gas. Since the accounting for natural gas companies is generally done in accordance with utility concepts the term "cost of transportation" or "cost of service" is generally understood in the industry to mean the actual cost of performing a service including a reasonable earning on the investment in facilities required for the performance of the service.

Generally speaking, operating costs and administration amount to about 15 to 20 per cent of the cost of transportation while the remaining 80 to 85 per cent is related to the capital cost of the facilities involved. Both depreciation



and general taxes, which are principally ad valorem taxes, are directly related to the cost of the facilities. In order for a project to be economically feasible, its operation must earn full interest charges plus net income, after income tax, sufficient to make the project financeable.

Since the Westcoast Peace River pipeline and Gas Scrubbing Plant have only been in operation since October 1, there is insufficient experience upon which to base definitive operating costs. However, for the information of the Commission, there is set out in Exhibit "C" and that is also in this green book, an estimate of revenues, expenses and income for the years 1958, 1959 and 1960 as submitted to financial institutions and underwriters in support of the economic feasibility of the Westcoast project. This statement was based upon the operation of the pipeline assuming that it would take three years to build up to its initial installed capacity. No attempt was made to forecast operating results which may be reflected in increased throughputs.

The Proposed Westcoast Project Serving Southern and Central Alberta and Southeastern British Columbia: Westcoast has made application to the Oil and Gas Conservation Board of Alberta for a permit under The Gas Resources Preservation Act, being Chapter 19 of the Statutes of Alberta



1951, to purchase in the Province of Alberta and transmit to markets in Alberta, British Columbia and the United States a total of one trillion, three hundred billion cubic feet of natural gas during the 25-year term of the permit at a rate of not more than 55 billion cubic feet of gas in any one year nor more than 170 million cubic feet of gas in any one day.

Westcoast plans to purchase an average of 80,000 Mcf of gas per day in the Savanna Creek field and take delivery from the Calgary Processing Plant of from 50,000 to 100,000 Mcf per day as may be available after due provision at the outlet of the Plant for delivery of any gas required to supply consumers in the vicinity of the City of Calgary or on the system of the gas distributing company serving the southern Alberta area, namely, the Canadian Western Natural Gas Company Limited.

The map, page 54, shows the planned expansion of the Westcoast pipeline system to take gas from the Savanna Creek and East Calgary fields of Southern Alberta. Westcoast plans to construct a 30-inch pipeline, 105.7 miles long, from a point on the Alberta British Columbia border in the Crow's Nest Pass area to the International Boundary near Kingsgate, British Columbia. That is the red pipeline on the map. Westcoast



Transmission Company (Alberta) Ltd. (Westcoast Alberta) plans to construct 43 miles of 20-inch pipe and 25.9 miles of 6 to 16-inch gathering system to deliver sour gas produced from the Savanna Creek wells to a Gas Processing Plant located in the vicinity of Coleman. That is the blue line from the Savanna Creek field running north and south to the processing plant in the vicinity of Coleman, Alberta.

Westcoast Alberta also plans to construct a sour gas gathering system connecting the Wimborne and Harmattan-Elkton, Sundre, Westward Ho fields to a processing plant to be constructed south of Calgary. This sour gas system will comprise 31 miles of 12-inch pipe, 22 miles of 16-inch pipe, and 130 miles of 20-inch pipe, with 26 miles of 8-inch lateral to the Harmattan-Elkton area. That would be the "Y"-shaped blue-coloured line at the top of the page.



It is proposed that Alberta Gas Trunk Line Company Limited (Trunk Line) will transport the gas purchased by Westcoast from the Calgary processing plant to the Coleman plant and then transport the total volume of gas to an interconnection with the Westcoast 30-inch line at the Alberta British Columbia border.

That is the green coloured pipeline running from Calgary via Coleman to the British Columbia border.

The cost of the entire project including plants, pipelines, and gathering system, but exclusive of well drilling, is estimated at about \$90,000,000. Of this amount the cost of the Coleman plant is estimated at about \$15,000,000, and the cost of the Calgary plant at about \$13,000,000.

The 30-inch pipeline planned by Westcoast will have an ultimate capacity of 660 million cubic feet per day and will provide a ready outlet for additional quantities of Canadian gas that may become surplus to the needs of the people of Alberta and Canada.

In addition to providing an outlet for surplus Canadian gas, the proposed expansion of the Westcoast project will have favourable impact upon the economy of Alberta, just as the original Westcoast project materially affected the economy of the Peace River area and British Columbia.



Gas will be made available for the first time to the communities of Coleman and Blairmore in Alberta, and Fernie, Cranbrook, Kimberley and smaller communities en route in British Columbia. The expenditure of large sums of money in drilling, pipeline construction and plant construction will be beneficial to the economy of Southern Alberta. The two large gas processing plants, one at Calgary and one at Coleman, will provide employment for many, and the sale of sulphur and hydrocarbon by-products in export markets will contribute to the flow of money into Canada. At least 8 drilling rigs will be required to complete the necessary development wells, and other exploratory drilling activity will accompany the opening up of an export market outlet from the area. In anticipation of this outlet, Westcoast and Pacific Petroleum and Associates have purchased acreage at Crown sale for over \$250,000 cash and are presently spending 2 million dollars in the drilling of two deep wildcat tests of foothill structures in Southern Alberta.

This program will develop the large sour gas Savanna Creek and East Calgary fields. These fields otherwise cannot be developed without an export market because large and costly plant installations are required to make gas from these and other fields in the vicinity of Calgary merchantable. Such plants can only be financed, and the fields



can only be economically developed by producing large volumes of gas uniformly throughout the year. The local gas companies do not have a market demand of sufficient volume or uniformity to undertake this development themselves. Having once developed these large gasfields, Westcoast can then make the plant residue gas available to supply consumers in Alberta who otherwise could not be supplied at economic prices.

Savanna Creek Agreement: Westcoast has contracted with 100% of the interests in the Savanna Creek field, namely, Phillips Petroleum Company, Northern Natural Gas Producing Company, Husky Oil and Refining Ltd., Canada Western Distributors Ltd., Anaconda Petroleums Limited, and Savanna Creek Gas and Oil Limited. This contract provides for the purchase of up to 1 1/2 trillion cubic feet at rates up to 187,500 Mcf per day depending upon gas reserves. With the gas reserve presently developed, Westcoast expects a production of a maximum of about 100,000 Mcf per day.

The price for gas purchased at the well head is fixed in the agreement as follows:

(see page 1037 for table)



Per Mcf of Pipeline Gas

Period	Column 1	Column 2	Column 3	Column 4
From date of first deliveries to the following next January 1st	12¢	13¢	14¢	15¢
Next 3 years	12¢	13¢	14¢	15¢
Next 1 year	12 1/3¢	13 1/3¢	14 1/3¢	15 1/3¢
Next 1 year	13 1/3¢	14 1/3¢	15 1/3¢	16 1/3¢

Thereafter the price specified in each of the above columns shall be increased by 1/3¢ per Mcf at the beginning of each year.

The prices set forth in Column 1 above shall apply to all gas sold hereunder except during such times as prices set forth in the other columns are applicable as hereinafter set forth.

The prices set forth under Column 2 above shall apply to all gas sold hereunder:

- (a) In any month of the term hereof during which the contract volume as defined in Article V hereof equals one hundred and fifty million cubic feet per day, or
- (b) In any month of the term hereof during which daily volume of gas received into the pipeline from sources within an area within fifty miles of the pipeline or an area within the Province of Alberta bounded on the north by the north line of Township 26, on the east by the east line of Range 22, west of the 4th meridian



and on the west by the west line of Range 8, west of the 5th meridian (both areas are hereinafter called 'the area'), equals 250,000 Mcf per day but is less than 350,000 Mcf per day.

The prices set forth under Column 3 shall apply to all gas sold hereunder:

(a) In any month of the term hereof during which the contract volume as defined in Article V hereof equals one hundred and fifty million cubic feet per day and during which the average daily volume of gas received into the pipeline from sources within the area, equals 300,000 Mcf per day but is less than 400,000 Mcf per day.

(b) In any month of the term hereof during which the average daily volume of gas received into the pipeline from sources within the area, equals 350,000 Mcf per day but is less than 400,000 Mcf per day.

The prices set forth under Column 4 above shall apply to all gas sold hereunder:

(a) In any month of the term hereof during the average daily volume of gas received into the pipeline from sources within the area, equals 400,000 Mcf per day



or greater.

The point there is that the price starts at 12¢, for the present situation, and escalates upwards over a period of years and you will notice the progression in this table. As the volume throughput of the system increases as we go along with later dates and take out additional volume of gas, we are able to pay higher prices, and the price is further escalated by an additional 2¢ per MCF.

MR. FRAWLEY: Before you go into that next section, might I interrupt you for a little clarification. I understand you are not going to take the gas from Savanna, the Savanna field; that you have made a different arrangement now and Mr. Mahaffey's company is going to take the gas out from where he joins the main line?

MR. HETHERINGTON: No, that is not right. Our plan and intention is to take the gas from the Savanna Creek field. This is a very high sulphur content gas, which is corrosive and must be dealt with and gathered in process. The field itself is located at the top of a mountain and we are dealing with an elevation of 8500 feet, right on top of the Rocky Mountains, literally.

It is our contract with Phillips and our plan to go to each of the individual wells and put the necessary equipment on each well, so that the



high sulphur content will not be corrosive to ordinary steel and then gather the gas to the central point in the field, install a second dehydration plant as a precautionary measure and then gather this sour gas still further through 43 miles of 20-inch pipe to the Coleman plant. We treat this pipeline system in the Savanna Creek field in the plant in which we handle high sulphur and non-merchantable gas and it is purely a gathering facility as part of the gas processing installation of making the gas merchantable.

MR. FRAWLEY: Please correct me if I am wrong, and I may be wrong; but does that not offend the whole concept of the Alberta Gas Trunk, which was formed to feed export lines?

MR. HETHERINGTON: No, it does not offend the concept, because, as I understand the concept of the Alberta Gas Trunk line, it was to handle gas and carry it in the areas of the population centres of Alberta so, if gas were available from one source, it could be put into this common grid or pool and, if Calgary or Edmonton or any of the other communities wanted gas, they could take it out of the common pool. This gathering system we have is neither near any populated centre nor are we taking any gas out or putting any in.

MR. FRAWLEY: I perhaps should apologize for interrupting at all, but let me ask you one



further thing:

Didn't Alberta Gas Trunk appeal the right to take the gas from the Savanna field ---

MR. HETHERINGTON: Mr. Mahaffy made a submission to the Conservation Board, which he read, and stated they were not in agreement that we should build that line and he intended being heard on that.

MR. FRAWLEY: Thank you very much.

THE CHAIRMAN: Just one question: the Commission are not as familiar with personages in Alberta as you are, Mr. Frawley and Mr. Hetherington. Would you mind telling me what company -- I think I can get the inference -- but would you mind telling me of what company you speak when you refer to the Mahaffy company?

MR. FRAWLEY: That is the Alberta Gas Trunk Line Limited and I think Mr. Mahaffey is the president or general manager.

THE CHAIRMAN: Thank you.

MR. HETHERINGTON: Coleman Plant Agreement: Under date of June 3, 1957 Westcoast Transmission Company Limited and Jefferson Lake Sulphur Company entered into an agreement for the joint ownership of a gas processing plant to process gas produced from the Savanna Creek field. The site of this plant has been selected at Coleman.

East Calgary Field Agreement: Agreements



have been reached with Jefferson Lake Sulphur Company under dates of June 18, 1957 and July 3, 1957; and with Merrill Petroleums Ltd. under date of August 1, 1957 for the purchase of up to 1 trillion cubic feet of gas at rates up to 125 million cubic feet per day from the East Calgary field, depending upon reserves. With the gas reserves presently developed, Westcoast expects to take 56 million cubic feet per day.

The price for the gas at the outlet of the processing plant is fixed in the agreement as follows:

First year:	14¢
Second year:	14 1/2¢
Third year:	15¢
Fourth year:	15 1/4¢

And each year thereafter commencing with the fifth year up to and including the twentieth year of deliveries, the said price of 15 1/4¢ shall be progressively increased at the rate of 1/4¢ per year.

Wimborne, Harmattan - Elkton Areas Proposal: As noted above, the application of Westcoast contemplates the construction of a large diameter pipeline system to export initially a relatively small volume of gas surplus to Alberta requirements. The facilities to be constructed will provide an outlet for over 660,000 Mcf per day. As additional volumes of gas become surplus to Alberta requirements, Westcoast is in a position to purchase such volumes, and by virtue of



having originally constructed such large capacity facilities, can economically market such gas in the United States.

Arising out of its consideration of the problem of meeting the gas requirements of the city of Calgary, Westcoast proposes to make use of this additional pipeline capacity so that additional gas production in the Wimborne and Harmattan-Elkton areas may be developed. In the initial stages of production this gas can be marketed by Westcoast through delivery to its United States customer under terms reserving therefrom volumes that may be needed to supply peak load requirements of the City of Calgary. The cost of the gas so supplied to the City of Calgary will be reasonable as indicated by the calculation of estimated costs submitted in Exhibit B, which is the green book, which I will deal with in a minute.

As shown on the map, page 54, Westcoast proposes the construction of a sour gas gathering system from the Wimborne and Harmattan-Elkton areas passing adjacent to the Olds, Crossfield and East Calgary fields. The sour gas would be gathered to a suitable plant site south of Calgary near a water supply and on rail transportation where the gas would be processed. Gas from the Sarcee and Okotoks fields could also be conveniently processed in the same plant.



Westcoast has offered to purchase gas from Wimborne and the Harmattan-Elkton area and to provide an immediate high volume, high load factor market. The majority of the producers in the Wimborne field have indicated their approval of the Westcoast proposal, subject to completion of definitive agreements and the issue of the required approvals from the Oil and Gas Conservation Board. Producers in the Harmattan-Elkton-Sundre-Westward Ho area have reserved their decision pending completion of engineering studies with respect to the use of the gas produced in the field for repressuring or recycling.

Westcoast proposes to purchase high pressure raw gas at the wellhead at Wimborne and compressed and gathered gas at a central point in the Harmattan-Elkton, Westward Ho, Sundre area and to pay prices starting at 12¢ per Mcf of residue gas and escalating upward plus 20 per cent. of recovered hydrocarbon by-products. The plan assumes that the Wimborne operators will be authorized to operate the field as a gassy oilfield. This assumption is supported by studies of Westcoast engineers. Westcoast has offered to install and operate the Harmattan-Elkton field gathering and compression facilities for the producers on a utility rate of return basis.

In addition to making gas available for



the future use by local consumers and supplying a present export market, the plan offers a means to conserve oilfield gas which otherwise may be wasted.

The economics of carrying out this plan along with the basic plan of Westcoast as set forth in its application of July, 1957 to the Oil and Gas Conservation Board is fully described in Exhibit B.

Calgary Processing Plant: The plant to be constructed at Calgary will have an initial peak day capacity of 139.6 MMcf per day of sour natural gas to supply 114.7 MMcf per day of dry and sweet natural gas (both measured at 14.4 psia and 60° F.) for delivery to Westcoast's 30-inch transmission system, and to produce a maximum of 499 long tons of sulphur per day. The facilities will be designed to permit expansion as required to process increasing volumes.

The raw gas, to be received at the plant, is estimated to contain 10.02 per cent. hydrogen sulphide which must be removed to provide a merchantable specification pipeline gas.

The details of gas analysis, estimated capital cost and estimated operating costs are set forth in Exhibit B.

Westcoast and Jefferson Lake Sulphur Company propose to construct and operate the gas processing plant as partners sharing equally in the



construction costs, operating costs and revenue from the sale of sulphur. The Westcoast share in the operating profit or loss, as the case may be, will be credited or debited on a cost of service basis to the operation of the proposed sour gas pipeline system.

Pacific Northwest Agreement: This agreement of May 25, 1957 between Westcoast Transmission Company Limited and Pacific Northwest Pipeline Corporation provides for the sale of 150 million cubic feet per day at Kingsgate, British Columbia. Under date of December 9, 1957 this agreement has been supplemented to provide that the price of gas at the international border shall not be less than the full cost of service incurred by Westcoast in purchasing and transporting the gas to the international border.



MR. FRAWLEY: Is that agreement in your exhibits?

MR. PATTILLO: No, the agreement is not there. There are two letters of intent, but there is no agreement as such.

MR. FRAWLEY: There is a gas sales agreement, Pacific Northwest Pipeline Corporation under Tab 15. Mr. Pattillo says it is just a letter of intent.

MR. HETHERINGTON: Yes, but it is a form of agreement. It is Tab 15 of Section B of the exhibits.

MR. PATTILLO: Well, it refers to an agreement, but the agreement to which it refers is not there.

MR. HETHERINGTON: Yes, it refers to a draft form of agreement, and that draft form of agreement is not included.

MR. FRAWLEY: It is just a little old agreement.

MR. PATTILLO: Mr. Hetherington, I do not think an agreement to make an agreement in the form is of much assistance when the agreement in the form is not there.

MR. FRAWLEY: It refers to an earlier letter of May 25th, 1957, and that is here.

MR. HETHERINGTON: I am sure we will be happy to furnish it. It is just a big bulky



agreement, but we will be happy to furnish it.

THE CHAIRMAN: Would you make that clear. Is it a draft of an agreement, or is it an agreement?

MR. HETHERINGTON: No, it is a draft. The letter says we will enter into an agreement according to the terms and conditions of the draft form of agreement attached. It is a draft form of agreement, but we will furnish that.

THE CHAIRMAN: Thank you.

MR. HETHERINGTON: Inland Natural Gas Co. Ltd -- Letter of Intent: Under date of July 29, 1957, Inland Natural Gas Co. Ltd indicated its intention to furnish distribution services from the Westcoast pipeline to adjacent communities in southeastern British Columbia.

Gas Sales Agreement to Meet Alberta Requirements: Pursuant to the provisions of The Gas Resources Preservation Act Westcoast Transmission Company Limited is prepared through its subsidiary, Westcoast Alberta, to make available from gas supplies under contract to it from time to time, such volumes of gas as reasonably may be required to meet demands of consumers in the southwestern and central parts of the Province of Alberta which cannot be supplied by the company or companies distributing gas in such area. The sale of such gas will be carried out as an integral part

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of the operations of Westcoast in the same manner as sales of gas by it to its customers in British Columbia and the United States.

It is planned that the gas for local use will be transported by the Alberta Gas Trunk Line Company Limited.

Alberta Gas Trunk Line Letter: By letter dated July 31, 1957, Alberta Gas Trunk Line informed Westcoast that it would apply for the necessary authorizations and undertake the construction of the necessary facilities to transport within Alberta gas required by the expansion program of Westcoast upon a cost of service to be agreed upon.

MR. FRAWLEY: That is what I was talking about.

THE CHAIRMAN: And are those letters among the exhibits, Mr. Hetherington?

MR. HETHERINGTON: Yes, they are, Mr. Chairman.

MR. FRAWLEY: There is no mention of the Alberta Gas Trunk Line letter.

MR. PATTILLO: I do not recall seeing that letter.

MR. HETHERINGTON: I have checked the index, Mr. Chairman, and I do not believe we have included either the Inland letter or the Alberta Gas Trunk Line letter, but we would certainly be glad to do that, if you wish.



THE CHAIRMAN: Yes; would you do that, please?

MR. HETHERINGTON: Yes.

Gas Supply for City of Calgary: The data in Exhibit B to this submission is presented to the Commission to illustrate the economics which require consideration in the construction of a pipeline project and particularly to illustrate the problems concerned in gathering and distributing gas within the Province of Alberta.

The material submitted has reference to the City of Calgary since it is the southern and central part of the area of the province from which Westcoast proposes to take delivery of gas for export as above set forth. Reference is made to "Illustrative Deliverability Schedules for the Supply of Local Requirements -- Area Tributary to Canadian Western Natural Gas System" set out in Exhibit B. These schedules show in detail a method under which deliverable gas from various fields are allocated so that over the years an economic supply of gas can be provided, and by economic is meant economic on behalf of the producer of the gas, economic in regard to the gathering, transmission and treating of gas, and economic in price to Alberta consumers.

As other submissions will have indicated, the most important factor which affects the availability



of gas and the cost of gas to Alberta consumers is the fact that large volumes of gas are required during the cold winter days and only minor quantities of gas are required during the summer months. This problem is one which can be met first by utilizing storage, and second, by utilizing facilities made available through the sale of gas in the export markets. The latter method is by far the more important in an area of expanding reserves, having regard to the long term benefits to the people of Calgary, the Province of Alberta and Canada as a whole.

The attention of the Commission is particularly drawn to the fact that in the above mentioned illustrative deliverabilities it is assumed that the additional storage facilities will be provided through the development of the Carbon gas field east of the City of Calgary as proposed by the Canadian Western Natural Gas Company Limited.

MR. FRAWLEY: We should strike out that reference to "oil" in "the Carbon oil and gas field"?

MR. HETHERINGTON: Yes.

The engineers of Westcoast are of the opinion that this storage proposal is a logical development and will be of great assistance in providing a supply of gas to meet peak load demands



of the City of Calgary over the years to come at a reasonable cost.

Conclusion: Many of the factors bearing on the question of policy to be adopted with respect to the export of natural gas having regard to the interest of consumers in all Canada, have been under consideration in the Province of Alberta since 1949, when the Legislature of Alberta enacted The Gas Resources Preservation Act.

After the experience gained in Alberta from 1949 to 1956, the Legislature of Alberta revised its direction to the Oil and Gas Conservation Board with respect to the public interest in the export of gas from the Province of Alberta.

Section 7, subsection (3) of The Gas Resources Preservation Act 1956, reads as follows:

- "(3) The Board shall not grant a permit for the removal of any gas from the Province unless in its opinion it is in the public interest to do so having regard to
- (a) the present and future needs of persons within the Province, and
 - (b) the established reserves and the trends in growth and discovery of reserves of gas in the Province."

The Oil and Gas Conservation Board of Alberta is therefore directed to give consideration



to the trends in growth and discovery of resources of gas in the Province.

It is submitted that any consideration of the future needs of consumers in Canada should be related to the trends in growth and discovery of reserves of gas in Canada as a whole. Accordingly, the national policy should be so constituted as to take into account those factors which will maintain continued aggressive gas exploration and development programs with respect to gas reserves in Canada. Two factors, it is submitted, are of vital importance in this connection, namely, potential markets and the price of gas in the field.

Potential Markets Related to Trend of Gas Discovery: The submissions to the Commission indicate the existence of tremendous potential volumes of gas in the Western Sedimentary Basin. This gas only becomes an asset to Canada and a contribution to the national economy provided it is discovered, produced and marketed.

It is submitted that the market demand based on satisfying requirements of Canadian consumers alone, will not provide the incentive required to induce exploration for and development of this potential natural resource. The only markets which will create this demand are the export markets in the United States.

The potential market demand created by a



policy which favors export of gas surplus to the requirements of Canadian consumers, is the factor which will influence the drilling of step-out or development wells required to evaluate prospective gas producing structures which have been discovered by initial exploratory operations. Even at this date there are a great many discovery wells in Alberta and British Columbia which have indicated potential gas producing structures but because of the lack of potential market, further drilling has not been continued. As soon as the owners of such structures are assured that a market will be available for the gas which may be proved up in such structures, they will be justified in proceeding with the drilling of step-out and development wells. The drilling of these step-out and development wells can be expected to establish ever increasing gas reserves, which then can be utilized to satisfy the potential increasing market demands.

Price of Gas in the Field Related to Trend of Gas Discovery: It is only in recent years that the field price of natural gas has been fixed by the application of the same economic standard applied in fixing the price of other commodities of general consumption, that is to say, that the costs incurred in finding and producing gas have been taken into account along with the demand for gas and the price which it commands in



the markets in which it is consumed.

This is particularly so in connection with recent contracts entered into between producers and the pipeline companies serving markets in the eastern United States. These contracts have taken into account the extraordinary expenditure required in offshore drilling in the Gulf of Mexico and the prices which industry is prepared to pay in large centres of population for gas delivered at plant gates.

The impact of these economic factors on the pricing of natural gas will be felt more and more by consumers of gas both in Canada and the United States since present consumers have been purchasing gas at prices based upon the sale of gas as a surplus commodity produced along with oil and delivered to pipeline companies at nominal prices as an alternative to flaring the gas. Nowhere is this situation better illustrated than in the gas supplied to the City of Calgary from Turner Valley from 1921 to 1945 when the gas was sold at the nominal price of 2c per Mcf and about a trillion cubic feet of gas was flared in order to permit the production of condensate and oil. In 1947 the price of gas in the field was fixed at 4 3/4c. This price was authorized by the Natural Gas Commission as part of a scheme of Conservation. This was the first instance where gas produced in an oil field was



was given recognition in Alberta as having an economic value in itself.

In general, there is no reason why the price of gas in the field will not be fixed by the same economic principles applicable to other mineral products, namely, the competitive value of the product at the point of consumption less the cost of transportation. If the field price is sufficient to justify incurring the risks of exploration and the costs of development drilling and operation, increasing supplies of gas will be made available.

At the present time there is a substantial demand for Canadian gas in the United States markets at prices which will warrant continued exploration and development by producers in Canada. This market should be secured so that this development can be carried out on an economic basis. If this market is not now served it may be lost because of the introduction of competitive fuels at the points of consumption which may establish prices that will not justify exploration and development costs in Canada and result in the loss of the economic utilization of this natural resource.

Oil Field Gas must be Marketed: In general, the greater part of natural gas discovered to date in Canada has been gas associated with oil and in solution in oil which must be produced as a part of an oil field operation or an oil-gas field operation.



Since the conservation of gas is recognized by all concerned as a sound principle, it follows that unless gas produced with oil is marketed on a reasonable basis that the principle of conservation must be departed from and the gas wasted or the production of oil prohibited. There are numbers of illustrations of this situation in the Province of Alberta, today, namely, Leduc field, Redwater field, and Pembina field.

In its submission with respect to supplying gas to the City of Calgary Westcoast has illustrated the method whereby the utilization of oil field gas for export purposes subject to such gas being available when required to meet local peak day demands, is very much in the interests of Canadian consumers.

Export Reduces Canadian Transportation Costs: In describing the Westcoast project it has been shown that the delivery of Peace River gas to the Vancouver area at economic prices is made possible by the transportation of the large volumes of gas required for the export market served by the Westcoast system. There would appear to be no question that, as from time to time in the future, large volumes of gas are transported to export markets, the pipelines carrying such gas will at the same time supply Canadian consumers en route with gas at costs much lower than if the





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smaller Canadian market were to be satisfied from the same sources of supply.

In the back of the brief we have shown some official illustrations of the construction of the Westcoast pipeline. The first picture shows survey crews staking out the route of the line. The picture below that shows the first load of pipe that came over from the United Kingdom. We bought 96,000 tons of steel from the South Durham Steel & Iron Company. The following pictures show the pipe being transported -- rigged up on the flat cars and transported through British Columbia. They show the stringing of the pipe in British Columbia, and there are a number of construction pictures. Rivers are crossed with the pipeline.





There is one picture on the left side of the page, the back side of the second page, shows the laying of the 30-inch pipeline across the Coquihalla River which is the Coquihalla Pass area of British Columbia. The pipe is coated and wrapped to protect it from corrosion and large concrete weights are bolted on the pipe so the pipes will sink when put into the water. Ordinarily a 30-inch pipe is so buoyant it floats. Then there are the various pictures of the pipeline crossing the various rivers.

There is a picture of the pipeline going into No. 5 compressor station at Australian, British Columbia.

There is one picture of a plant on the back of the fourth page. It is a partial view of one of the processing plants. This plant, incidentally, is installed with all of the Westcoast installations, and installations of Jefferson Lake Sulphur Company and Phillips Petroleum Company; an investment of over \$30 million.

Since our power stations and compressors are ordinarily remotely located along the road of the line we have to build houses so we have villages and houses for the employees and there is a picture of one of the compressor station housing settlements.

MR. FRAWLEY: You did not tell your camera man to keep out of Alberta, did you? Maybe there



was not anything of which to take a picture.

MR. HETHERINGTON: In the brief we refer to what we call Exhibit B-C. Those are contained in this green-bound volume and I thought it worth while just to thumb through, if it is your pleasure, and point out just what the various exhibits are in the green-bound volume.

THE CHAIRMAN: May we deal first with Appendix "A"?

MR. PATTILLO: I think we can take that as read.

MR. HETHERINGTON: I think it is self-explanatory.

MR. PATTILLO: And Appendix "B".

THE CHAIRMAN: And Appendix "B". In that way it gets on our record.

---APPENDIX "A": Capital Structure.

---APPENDIX "B": Trillion Cubic Feet Energy Equivalent.

MR. HETHERINGTON: In the green-bound volume of exhibits what we call Exhibit A sets forth the authorization of the Westcoast Company's approach.

Under Tab 1 is the permit of the Petroleum and Natural Gas Conservation Board of Alberta.

T b No. 2 gives the Order of the Board of Transport Commissioners for Canada.



Tab 3 gives the export licence from the Department of Trade and Commerce.

Tab 4 is the Act: An Act to regulate the Exportation of Power and Fluids and the Importation of Gas.

Tab 5 gives the Pipe Line Act of Canada.

This next exhibit (B) presents what we thought were the pertinent parts of our application to the Alberta Oil and Gas Conservation Board in connection with our project to build a pipe line system to delivery and export gas in Southern Alberta.

Tab 6 gives the application to the Oil and Gas Conservation Board.

Tab 7 gives the contract for the purchase of gas in Savanna Creek field.

Tab 8 is the estimates prepared by and under the direction of Dr. George S. Hume and Mr. Peter Kutney of the deliverability from the Savanna Creek field.

Tab 10 is an engineering description of the proposed processing plant for the Savanna Creek gas supply.

Tab 11: this is the agreement between West-coast and Jefferson Lake Sulphur Company covering the processing plant for Savanna Creek gas supply.

Tab 12 deals with the gas purchase agreement which is, really, a two letter agreement,



dealing with the arrangements Westcoast has with Jefferson Lake for the purchase of gas from Southern Alberta and East Calgary.

Tab 13 gives the estimates of gas reserves in the Calgary field.

Tab 14 gives the estimate of the deliverability from the Calgary field prepared by our reservoir department headed by Dr. W. J. McPherson.

Tab 15 gives the arrangements we had with Pacific Northwest for the sale of additional volumes of gas for export and it is this tab for which we will furnish a draft form agreement to which we referred a little while ago.

Tab 16 sets forth our proposed arrangements for the supply of gas to meet local requirements and I think it is worth while looking at this in some detail. Part of this is a duplication of material presented in the brief. Under Tab 16, on the second page, I have listed all of the gas fields on which new information had been obtained, new drilling had been done and new gas reserves had been discovered since the preparation of the report of the Alberta Oil and Gas Conservation Board in January, 1957, a year ago. I set forth the Board's report as of January 1957, the estimate from the Board's report, along with our estimate, and our estimate is based upon new information and additional drilling. We get a



total of 7.3 trillion cubic feet. Last year the Board's estimate of these same fields was 3.2 trillion cubic feet so we have, roughly, obtained an increase over the last year and a few months of 4 trillion cubic feet. This, added to the Board's figure of 18.3 trillion cubic feet is the basis for our estimate of 22.3 trillion cubic feet of gas reserves proved and developed as of this date.

MR. FRAWLEY: This is the kind of information you intend to bring before the Conservation Board upon your application for an export permit?

MR. HETHERINGTON: We have admitted this information before the Conservation Board on direct evidence.

MR. FRAWLEY: It is to be disposed of at the hearing that is coming up?

MR. HETHERINGTON: Yes, it will. This written submission under Tab 16 also sets forth the statement of population and an estimate of future requirements and gives the basis upon which we estimate the future requirements of the Province of Alberta for the next thirty years and we come up with just a slightly larger figure than the Conservation Board and just very little less than the gas companies themselves estimate.

Then Table 1 is the table that we thought sufficiently important to put directly in our brief



and it is the table I have already discussed. It is a list of all the gas fields of Alberta allocated to their logical use.

Table No. 2, revised January, 1958, is this great long table but do not let the length of this thing disturb you. It is an important table and it is really simple in principle. Looking at it for the minutes, it is an illustrated deliverability schedule for the supply of local requirements area tributary to Canadian Western Natural Gas System for what can be supplied for the next thirty years. Column No. 1 lists the year, then under each field we have calculated using the recognized method of projecting gas field deliverability. We have calculated how much gas can be taken out from these various fields each year and had taken out and what the resulting load factor would be. The first sixteen columns shows the sources of base load presently connected to the Westcoast system; Turner Valley has been connected for some time and it is capable of 95 million cubic feet per day. The Jumping Pound field has been connected for, I do not know exactly the number of years, all of five years, I would imagine, and the gas company has continually increased the contract with Shell Oil for additional volumes of gas and in the latest increase the gas company has negotiated with the producer of this field, Shell Oil, for 90 million cubic



feet per day and our reservoir engineers say 90 million cubic feet can continue to be taken out of the Jumping Pound field until 1967 or thereabouts at which time the field will have declined.

The next column, Fenn-Big Valley-Stettler goes into a separate system. Columns 11, 12, 13 show the production of gas from Okotoks, and we are negotiating a contract to get this gas into the system and they may have completed it. In any event it is a prospect that is practically a reality.

And then in the next columns 17 to 29 shows the source of peak load gas.

I would like to emphasize that these first sixteen columns here are basically base load gas; the gas is all sour and requires processing; with the exception of Turner Valley it is very, very difficult and uneconomic to produce it on other than a fairly straight peak load factor. Oil field gas comes higher on a 100 per cent load factor because on a peak day in winter production is down. It is the production that is required on a peak day, usually in the winter time, so that does not help the gas company any.

The first sixteen columns are base load. Columns 17 to 19, peak load. They have been using these fields for many years and they are excellent fields for capacity.



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In columns 21, 22 and 23 I show the Calgary field basal quartz. This is the sweet gas found in the upper horizons of our East Calgary field, and we feel that if the drilling program of Jefferson Lake Sulphur Company actually proves up the deliverability of this sweet gas that it could be used for Calgary, and we don't propose taking any out of Alberta for export purposes.

The next columns, 24, 25 and 26, show the peak load that can be attained by developing the Carbon field. I said in the brief, and I would like to emphasize again, that we of West-coast feel the Carbon project is a very sound, practical way of meeting the requirements for peak load gas for the City of Calgary. The situation in Calgary is inescapable: we have a load factor on the market of about 42 per cent; nearly all of the gas that is available for Calgary today -- and it looks as if it will be available in the future -- is sour gas or oilfield gas that the gas companies take at fairly uniform rates. In the case of oilfield gas you have to take it when it comes; there is no alternative. In the case of sour gasfields that can be produced independently of oil, it is still necessary, if it is going to be economic and the gas is going to be received at any uniform rate, that this gas be taken through



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the expensive processing and pipeline facilities at uniform rates, so the annual cost can be spread over as large a volume as possible. So, we have a 42 per cent. load factor market and a 42.75% load factor supply, and there is no practical way out of it other than to put a flywheel in there and store the gas.

In my qualifications, which are on this record, you will see that I have designed the storage facilities that now are in Central Michigan that supply over one billion cubic feet a day to Detroit. Detroit had this same problem, but it wasn't as bad as Calgary because they had some industry; but it was solved by storage. I also both participated in the design of and operated for a period of years the storage fields in Pennsylvania that supply Boston and all the New England States, and in connection with the various gas studies we have made in Canada I am also familiar with the storage facilities of Union Gas Company in Windsor, Ontario, that have been, really, the lifesaver for that area of Southern Ontario.

I feel -- and I have studied this quite thoroughly -- that the gas company's plan to go to the Carbon field is a good one. It would be nice if there were a field closer, but I don't know of one, and I am sure the gas company doesn't either. Having added up all of the base load that



is available from present sources in Canadian Western and all of the peak load available, there is still going to be additional base load required in future years. In my estimate, these should be additional estimates, and are shown in columns 31 and 32. It starts in 1961 at 15 million cubic feet a day. The gas company by drawing more gas out of Carbon could forestall that a few years until, maybe, two or three years more; but that is not important. The point is that sometime in the early sixties, even if the gas company builds the system at Carbon, they are going to have to have an additional source of base load gas, and at the end of 30 years it has to be quite substantial. There is plenty of gas to supply that base load requirement right here in the fields around Calgary. The only thing that has to be done is to work it out by a scheme that is economic. We say the future sources of base load can be supplied from the West-coast sour system, which we have described in the brief, and which we show in the exhibits to the Alberta Conservation Board.

I would like to turn to the next table, which is Table **IIA**, and this table shows the make-up, or shows the sources of this future gas to meet the Canadian Western requirements.

The first three columns show the amount of gas that can be obtained out of the East Calgary



field. This is exclusive of the sweet gas which we have already said should be held for Calgary.

The next columns, 4 to 12, show the amount of gas that can be obtained from the very large oilfield in the Harmattan-Elkton-Sundre-Westward Ho area northwest of Calgary.

Columns 4 and 5 are the solution gas that could be obtained -- put it this way: it is the solution gas which if not used will either be burned, wasted or reinjected into the formation for pressure maintenance. Starting in about 1965 all of our estimates -- and, as a matter of fact, this is confirmed by consulting geologists -- the oil is going to be about depleted in the Westward Ho field, and we can produce the gas cap of that field. In the remaining part of the Harmattan-Elkton-Sundre-Westward Ho area it is going to be many years, and our estimate is it will be 1973, before any substantial quantities of gas cap gas can be taken from that area. That is shown in all of these columns here -- 4 to 12.

In columns 13, 14 and 15 we show the amount of gas that can be taken from the Wimborne field, which is north and a little east of Calgary, and it is more of a gasfield than an oilfield. It has produced a certain amount of oil, but it is rapidly going to gas, and it won't be long before this field will be operating as a gasfield.



So, in columns 16, 17 and 18 we show the total amount of gas that would come into this plant system that Westcoast proposes.

In the next columns, 19, 20 and 21, we show the amount of gas required by Canadian Western in the future taken from the previous Table II, revised, that I have just discussed.

The next three columns, 22, 23 and 24, are the difference between the available supply going into the plant and the amount that Canadian Western receives, and we put this under the heading, "Remainder for Westcoast", and it starts off in 1960 with 114 million cubic feet per day, and as local requirements increase it declines over a period of years to 40 million feet a day. I have shown this type of scheduling to both Pacific Northwest Pipeline Corporation and El Paso, and they have said, "We will buy the gas on this pattern". They recognize Canada comes first, and that by taking the gas initially they can develop the sour gas reserves, and they are willing to say, "All right, we will take the 114 million, and if you don't get any more gas 30 years from now we will be down to 40 millions."

THE CHAIRMAN: Mr. Hetherington, that is somewhat hearsay evidence as to what they said to you. Are they going to say that before the Commission?



MR. HETHERINGTON: Mr. Kayser has a brief.

THE CHAIRMAN: Well, I think he should state that.

MR. HETHERINGTON: All right. The point I want to make, carrying on with this table, is that there are three other fields in the immediate area of this gas pipeline system -- Crossfield, Olds and Sarcee. If that gas were put into this same system, which it could be -- and we don't have this gas under contract; it is mostly under contract to Alberta and Southern -- but if this additional gas were put into the system we would have the total amount available as shown in columns 37, 38 and 39, at the rate of 139 million cubic feet a day, and it stays like that for about eight or nine years, and then declines; but not as much as in the previous case. I have taken this up with our customer companies in the United States, and they have indicated to me that they would purchase on this basis, and that will be covered by Mr. Kayser.

MR. FRAWLEY: At 22¢?

MR. PATTILLO: Mr. Chairman, Mr. Hetherington has not yet been sworn, and I don't think we should get into anything other than his submission until such time as we are taking evidence.

THE CHAIRMAN: That is what I am trying



to avoid.

MR. FRAWLEY: Excuse me.

MR. HETHERINGTON: Table IIB simply is the same thing as IIA, considering one of these gasfields may turn out to be an oilfield. Cross-field recently got a well which indicated it may be an oilfield and may have to be deferred. This is just an alternate way of showing the situation.

Tab 17 gives a statement of our proposal along with the economics supporting the proposal. There are two pages of text and then this same map which has been included in the brief, and the next table, which is Table IIC, gives the economics or the forecast of income for the project, operating as I have described, and you will note that the basis for the calculations is to arrive at the 7 1/2 per cent. rate of return after all expenses -- purchase of gas, administration costs and all costs to the pipeline -- and we would end up with a 7 1/2 per cent. rate of return on our pipelines and plants.

The next page, Table IID, gives the resulting price to the United States, to the export market, required to earn the 7 1/2 per cent. rate of return on all of our facilities, and pay the producers the prices that are set forth in our gas purchase agreements, and that price is shown on the third line down: it is 26.65¢ per MCF in 1960, 26.12 in 1961, and so on. That is the prices we



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estimated today, based on these calculations,
that Pacific Northwest would have to pay in order
to pay our field prices, operating expenses, and
give the pipeline facilities in Canada, including
Alberta Gas Trunk Line, a 7 1/2 per cent. return.



Now, the next tables are more or less details backing up the cost, and the last table I would like to refer to is the very last table under this tab, which is Table 2(n).

This is a calculation of the cost of gas that would be residue out of this plant right at Calgary's doorstep and would be a measure of what Calgary could expect to have to pay if they bought gas from our proposed system and we earned a $7\frac{1}{2}$ per cent return on all our facilities.

The price is given, at the second line from the bottom, where it says, "Cost of gas, cents per Mcf," and in 1960 it is 18.25 cents and, in 1961, it is 18.14 cents and, in 1962, it is 17.87 cents.

Now, there is a thing of interest here that I think is worth reviewing. The prices that we pay, or propose to pay, under the gas purchase contracts escalate up, over a period of time. Now, that does not mean that the cost of gas delivered at any point will increase, because depreciation is accruing all this time, so the rate of return is computed on a smaller remaining investment and it shows, in this table, that even over a five-year period, although the price of gas to the producer has gone up, the price to the consumer stays about the same.

MR. HELMAN: May I just interrupt to ask!



Do those prices include peak load gas?

MR. HETHERINGTON: No. This is gas at 90 per cent load factor out of the plant, because the plant would have to operate at that high load factor.

MR. HELMAN: I see.

MR. HETHERINGTON: Tab 18 just deals with a description of the processing plants.

Tab 19 covers the offers to the Wimborne, Harmattan, Elkton producers. We have letters from all the independent producers in the field, indicating an interest, some indication or expression of intent. Those are not included here but they are available if they are wanted.

Then Tab 20 is the same, the gas sales agreement to meet Alberta requirements that we referred to previously.

Then, in the following tabs we set forth the gas reserve estimates of a number of the important fields, and they are submitted, principally, for information purposes.

Then, Exhibit "C", which is the very last tab, Tab 32, gives an estimate of revenues, expenses and income for the Westcoast project for the years 1958, 1959 and 1960, as stated in the brief, assuming it would take three years to build up to the initial capacity which I mentioned.



THE CHAIRMAN: Thank you very much, Mr. Hetherington.

I think this would be a good time to have a ten-minute break; but confine it, if you will, gentlemen -- those of you who are participating -- to ten minutes, because we must adjourn today at four-thirty, due to the fact that the hall is required for other purposes.

---Short recess.

THE CHAIRMAN: We will now resume the hearings, gentlemen, please.

MR. PATTILLO: Mr. Chairman, before we hear from Mr. Kayser, I am proposing that we mark the remaining exhibits of Westcoast, which all can be taken as read. There are two profit and loss balance sheet statements and a booklet containing material regarding the scrubbing plant and also a map, and then I would like to suggest -- and I have discussed this with my friend, Mr. Chambers -- that Mr. Hetherington be sworn and then he stand aside.

THE CHAIRMAN: Mr. Pattillo, is this the document you refer to (indicating)?

MR. PATTILLO: Yes.

THE CHAIRMAN: I do not think that can be properly described as a profit and loss statement. It is simply the annual report and consolidated



balance sheet.

MR. PATTILLO: I didn't look at it. I just assumed the P & L. It is just the annual report, with the balance sheet, for the year 1957.

---EXHIBIT NO. C-12-1-B: Westcoast Annual Report for 1957.

MR. PATTILLO: Then the other document, which would be marked as Exhibit C-12-1-C.

---EXHIBIT NO. C-12-1-C: Red-covered booklet containing maps, sketches and plans.

---CHARLES RAY HETHERINGTON, sworn.

MR. PATTILLO: Thank you. Now, Mr. Kayser.

PAUL KAYSER, called

BY MR. PATTILLO:

Q. Mr. Kayser, would you give your full name, please?

MR. KAYSER: Paul Kayser.

THE CHAIRMAN: Do you wish Mr. Kayser's statement to go in now, Mr. Pattillo?

MR. PATTILLO: Yes.

THE CHAIRMAN: It would simplify matters.

MR. PATTILLO: Yes. This document of Mr. Kayser's will be marked as C-12-2.



---EXHIBIT NO. C-12-2: Statement of Paul Kayser,
on behalf of Pacific North-
west Pipeline Corporation
and El Paso Natural Gas
Company.

THE CHAIRMAN; Proceed, Mr. Kayser, please.

MR. KAYSER: I am President and Chief
Executive Officer of El Paso Natural Gas Company
and have held such position since the organization
of the Company in 1928. I am Chairman of the
Board and Chief Executive Officer of Pacific
Northwest Pipeline Corporation and have held such
position since the acquisition last year by the El
Paso Company of more than 99% of the common stock
of Pacific Northwest Pipeline Corporation.

The purpose of my appearance before this
Commission is to place before you the market for
natural gas served by the above two companies.
To make such presentation clearer, we attach a
map of the western section of the United States,
showing the pipelines of these two companies.

I cannot refrain from saying, at this
point, that I appreciate the opportunity to come
before this Board and to explain our operations to
you and show you how we can use the surplus gas
that you may desire to permit exported. I think
it is a privilege.

THE CHAIRMAN: We are very glad to have
you here, sir.



MR. KAYSER: We appreciate it.

Pipe Lines Involved: As shown on the map, the El Paso system -- and you will notice that it is the red lines at the bottom of the map -- consists of multiple lines connecting the gas fields of West Texas and New Mexico with the markets of West Texas, New Mexico, Arizona and California. The main transmission lines consist principally of 24" - 26" - 30" and 34" high pressure pipelines operating at pressures in excess of 800 lbs. per square inch. The company has in excess of seven thousand miles of main and branch transmission lines and in excess of four thousand miles of field gathering lines.

The Pacific Northwest system consists of 2,125 miles of main and branch transmission lines made up of 22" to 26" pipelines, with 474 miles of field gathering lines, connecting the various fields in the Rocky Mountain area with the markets of Colorado, Utah, Idaho, Oregon and Washington.

These two systems have various interconnections in the San Juan field in New Mexico, including a 24" high pressure line running from a connection with Pacific Northwest's line at Ignacio to El Paso's main lines in the field.

I would like to explain a little further about the map. You notice, in the lower section of the map, where the El Paso lines run



across New Mexico to Arizona, they are multiple lines leading to a point on the Colorado River. They are connected with lines represented in black, being lines of the Southern California Gas Company, where we make connection at the boundary between California and Arizona with that company. You will notice a connection with this lower line up to the second set of those lines leading from the river and there we connect with the Pacific Gas and Electric Company's lines, which are shown in black, leading on up to San Francisco, and we deliver on those two meters, at present, right up to 2 billion cubic feet of gas a day, a billion and 25 million to Pacific Gas and Electric and a billion and 30 million to the Southern California.

The total of those deliveries, at the moment, are not being made. Some 950 million a day are being delivered each, but we just finished, in Washington, a hearing on an additional 150 million to be delivered to those two companies and we are confident that the certificate will be granted and we are ready to very quickly build the necessary lines to bring those deliveries up to those two points.

Now, the present markets: Pacific Northwest at present receives from Westcoast Transmission Company Limited on the international border at Sumas, a point southeast of Vancouver, 300



million cubic feet of gas per day from the Peace River area of British Columbia.

Actually, the deliveries here are approximately 250 million and they will build that up, by the end of the year, to the full 300 million.

Of this amount El Paso purchases from Pacific Northwest 100 million cubic feet per day.

Pacific Northwest has a contract with Westcoast Transmission for the purchase of an additional 150 million cubic feet per day to be delivered to Pacific Northwest on the international boundary at Kingsgate, opposite the State of Idaho, the subject of the present application for export. This gas will be taken into the system by the construction of a 30" line from Kingsgate to Spokane, a distance of only 123 miles.

That is shown on the map at the international boundary in a purple dash line with a mark "123 miles". That connects with the West-coast Transmission line, which is some 178 miles in length from the Savanna Creek area.

Pacific Northwest proposes to sell and deliver this gas to the El Paso Natural Gas Company to supply additional demands of El Paso System's market, including the markets in California. In addition, Pacific Northwest has a contract with Westcoast Transmission for 250 million cubic feet per day to be obtained from the Peace



River area of British Columbia.

The present average daily market requirements of the Pacific Northwest system and the El Paso system projected under a five-year period, under certificates granted or now in hearings before the Federal Power Commission are as follows:

The Pacific Northwest (MCF per day), in 1958, 520,000; in 1959, 680,000; in 1960, 695,000; in 1961, 710,000 and in 1962, 730,000. The El Paso System, not including Pacific Northwest (MCF per day), in 1958, 3,166,000; in 1959, 3,295,000; in 1960, 3,266,000; in 1961, 3,284,000 and in 1962, 3,230,000.

Those figures for the El Paso System show no increase, by reason of the fact that the El Paso System operates at a load factor of substantially 95 to 97 per cent of capacity and, as we show later, under our review of potential markets, that is, additional markets we expect to be able to serve in the future, actually, we deliver on practically a 95 to 97 per cent load factor all of our authorized capacity.

The requirements for the El Paso set forth above include the deliveries to the Pacific Gas & Electric Company -- after the certificate which I mentioned a while ago -- of 1 billion 25 million cubic feet per day, Southern California Gas Company and Southern Counties Gas Company



1 billion 30 million cubic feet per day, and Southern California Edison Company 100 million cubic feet per day, making a total of 2 billion 155 million cubic feet per day for delivery to the California market.

Potential Markets: From reports made by the Southern California companies to the California Utilities Commission and from exhibits filed with the Federal Power Commission (about which I am personally familiar) the market for gas in Southern California will require, by the year 1960, 600 million cubic feet per day above the amounts set forth above. That is the amount we are now delivering to them or have contracted for and for which we have applications before the Commission.

In addition, it is estimated that such market will require, after such time, an additional amount of approximately 100 million cubic feet per day each year in the future.

This forecast of consumption is based upon a careful analysis of the demands for gas as related to population and industrial growth of the area. These demands do not include the demands of Pacific Gas & Electric Company as we understand such market study will be presented by Alberta and Southern Gas Company Ltd., in these proceedings.

To cover these increasing demands the Southern California Companies have entered into a



contract with the El Paso Company for 400 million cubic feet of gas per day in addition to all other contracts. Likewise, the El Paso Company has entered into a contract with Pacific Northwest for 400 million cubic feet per day to supply such demand.



G.G.

If Westcoast is permitted to export the 150 million feet per day, the subject of their application, and is able to fulfill its contract with Pacific Northwest for the additional 250 million cubic feet per day from the Peace River area, then the market of the El Paso System, including Pacific Northwest, will be able to take such gas by 1960 and absorb at least an additional 100 million per day in each of the years 1961 and 1962, if such is available.

To illustrate the rapidity of the growth of the California market, the demands of such market for gas to be supplied by the El Paso Company have increased from 300 million cubic feet per day in 1948 to 2 billion 155 million cubic feet per day in 1958.

In respect to the future market for gas in the territory serviced by the Pacific Northwest Pipeline Corporation, I wish to say that the experience of the El Paso Company in its service to West Texas, New Mexico and Arizona indicates that the demand for gas in the territory of the Pacific Northwest will greatly increase above the present demands. The deliveries to the El Paso Company's customers in West Texas, New Mexico and Arizona have increased since 1947 from approximately 150 million cubic feet per day to more than 650 million cubic feet per day in 1957.



From my experience, and a study of the fuel demands of the Western States of the United States, it is my opinion that the areas serviced by the Pacific Northwest Pipeline Corporation will have somewhat the same experience over the next ten years. It is my opinion that the demands for gas in this area will more than double in such period.

In respect to local Canadian requirements, because the various sources from which the El Paso System draws gas, large sources of supply at both ends of the system as well as in the approximate middle, it has great flexibility in meeting any deficiency of gas supply from any particular source on its entire system. For this reason we believe we will be particularly fitted to cooperate with Westcoast in developing and sustaining its plan as presented in the brief to develop large supplies of sour gas or sweet gas and make appropriate quantities of such gas so developed available for local demands.

In conclusion, we make this statement to demonstrate to you that the El Paso Company and the Pacific Northwest Pipeline Corporation with their network of pipelines presently connected to and servicing the western markets with the present connections to Canadian gas, are in a position, with a comparatively small capital outlay, to give an efficient and immediate outlet to any



surplus gas that the Canadian Government in its discretion desires to export. We wish to say to you that these companies are particularly desirous of obtaining at the earliest practicable date the 150 million cubic feet per day, the subject of Westcoast's present application, and that we are ready, willing and able to take the additional 250 million cubic feet per day from the Peace River area --- and I would like to say from Alberta if it is more in line with the Canadian Government's plans --- when it is developed and Canadian authorities are ready to permit its export.

Because our system is already connected to Westcoast Transmission Company's line at Sumas on the international boundary and because the additional connection we seek at Kingsgate requires the construction of only 123 miles of additional pipeline, we are able to take a large or a small amount of additional gas in whatever amount you in your discretion deem best for your economy.

THE CHAIRMAN: Thank you very much indeed, Mr. Kayser.

MR. PATTILLO: Now, I think before we go on -- is Mr. Lewis here?

MR. LEWIS: Yes.

MR. PATTILLO: Before we ask Mr. Kayser to step down I think he had better be sworn.

--- Paul Kayser, duly sworn.



MR. HELMAN: Are we not going to be able to ask the gentleman any questions at all?

MR. PATTILLO: Of course you are, but we are not going to proceed with any cross-examination until we have had all of the submissions put in. That was my purpose.

MR. HELMAN: I am sorry; I did not understand that.

MR. PATTILLO: And these gentlemen are all going to make themselves available tomorrow.

FRANCIS EDGAR LEWIS, called

BY MR. PATTILLO:

Q. Now, Mr. Lewis, would you please give us your full name?

A. Francis Edgar Lewis

MR. PATTILLO: May I have Mr. Lewis's submission on behalf of Jefferson Lake Sulphur Company marked as Exhibit 'C-12-3'?

--- EXHIBIT NO. C-12-3: Submission of Jefferson Lake Sulphur Company

MR. PATTILLO: Q. Mr. Lewis, would you please tell the commission from whence you come?

A. I am Vice-president of Jefferson Lake Sulphur Company in charge of Sales, with the Sales Headquarters in Houston. We also have a Canadian Sales Manager located in Vancouver. I



have been with the Company since March of 1955 as Vice-president in charge of Sales.

Q. And would you tell us whether this Company which is in Canada -- in British Columbia, we have heard -- and which is proposing to come to Alberta is a Canadian Company, or is it a Houston Company?

A. At the present it is the U. S. Company -- the New Jersey Corporation. We are at present in the midst of finance negotiations with one of the larger Canadian investment houses which, having regard to the usual problems of putting a new security on the market, we hope to have completed within the next 45 to 60 days. Jefferson Lake Petrochemicals Limited should be on the Toronto Exchange by the end of March.

MR. PATTILLO: Thank you very much.
Would you now proceed?

MR. LEWIS: Thank you.

Sulphur Production, Consumption Reserves:
Sulphur or brimstone as it was known to the ancients is one of the earliest known minerals or elements. The first records of its use are in the Asian and Egyptian civilizations where it was used in medicine, cosmetics and in religious rites. Sulphur is one of the most basic commodities known to mankind having a wide variety of uses, primary among which is in the manufacture of sulphuric acid.



Approximately 80% of all sulphur produced is consumed in the manufacture of sulphuric acid which is used in the manufacture of practically every article used by civilized man today.

The consumption of sulphur or sulphuric acid can be used to measure the extent of industrialization of a nation and some idea of its accuracy as a yardstick in this respect can be had from the fact that toward the end of World War 2 the Allied Intelligence Service used the figures on German production and consumption of sulphuric acid to determine the effectiveness of their bombing attacks on Germany to reduce industrial output.

The earliest commercial production of sulphur in large quantities was in the countries of Italy, Sicily and Spain. In these countries are located volcanic deposits of sulphur which prior to the 20th century produced essentially all the world's supply of elemental sulphur. The sulphur was produced by hand picking the ore, collecting it in piles which were then covered with a brick oven structure with a vent at the top.

Holes were provided at the bottom of the structure which could be opened or closed to control the amount of oxygen fed to the kiln or furnace and the sulphur ore was ignited at the bottom. As the sulphur burned other sulphur was smelted out of the ore matrix and the molten sulphur flowed



by gravity to the bottom of the pile and out of the furnace where it was collected for storage.

By the beginning of the 20th century sulphur had been discovered in the cap rock of salt domes along the Gulf Coast of Texas and Louisiana while exploring for oil, and Herman Frasch had developed a process known today as the Frasch Process for mining this sulphur. A syndicate was formed and after one or two failures Herman Frasch's company successfully produced sulphur from a salt dome deposit in Louisiana by his new process. The costs of production of sulphur by the Frasch Process were so much less than the costs of laboriously mining by hand the volcanic sulphur deposits that Frasch Process sulphur soon dominated world markets. Other companies were formed to produce sulphur by the Frasch Process, and in addition to the Union Sulphur Company (Herman Frasch's Company), Freeport Sulphur Company, Texas Gulf Sulphur Company, Jefferson Lake Sulphur Company and Duval Sulphur Company became producers of sulphur.

As mentioned above, sulphur occurs in the cap rock of salt domes which are found in the Gulf Coast of Texas and Louisiana. Sulphur does not occur in all of these domes, and of the known salt dome structures along the Gulf Coast (which number in excess of 300 to date) only about



20 have proved commercially productive of sulphur. The Frasch Process consists essentially of melting the sulphur in place with superheated hot water and lifting it to the surface with compressed air. A well is drilled into the cap rock of the dome and casing is set above the salt. A 6-inch hot water line is then placed inside of this casing and within the 6-inch a 3-inch sulphur line is set. The bottom portion of the 6-inch line is perforated to permit the escape of hot water into the formation while the bottom section of the 3-inch line is perforated, to permit molten sulphur collecting around the base of the well to enter the 3-inch line for lift to the surface.

Inside of the 3-inch line a $1\frac{1}{4}$ -inch compressed air line is extended to the bottom of the well, and after superheated hot water has been forced into the formation and a pool of molten sulphur collected at the base of the well, the compressed air is turned on, lifting the molten sulphur to the surface. The molten sulphur is then allowed to solidify in large blocks called vats from which it can then be removed in solid form by power shovels for shipment to the consumer.

Since the turn of the century the sulphur industry has been centered along the Gulf Coast of Texas and Louisiana and from these Frasch Process Mines, approximately 90% of the world's



supply of elemental sulphur has been produced. Within the last few years there have been several discoveries of sulphur in the Isthmus of Tehuantepec in Mexico. These discoveries have added substantially to the world's reserves of elemental sulphur recoverable by Frasch Process mining, and production from these mines is rapidly becoming of major significance. There are presently three Frasch Process producers in Mexico and their production of sulphur in 1957 was in excess of one million long tons.

Until recent years there was no other process for the production of elemental sulphur that could compare in cost of production with the Frasch Process. However, during the past ten years the Claus Process was developed to the point where production costs of elemental sulphur by this method now compare favorably with production costs from the Frasch Process mining operation. The Claus Process is based on catalytic chemistry and is used to recover sulphur from sour gas. After the hydrogen sulphide has been extracted from the sour gas the hydrogen sulphide is fed into a Claus Process sulphur plant where one-third of it is burned with air to form sulphur dioxide. The sulphur dioxide formed is then reacted catalytically with the remaining two-thirds of the hydrogen



sulphide to produce elemental sulphur of acceptable quality.

The successful development of this process, today makes the sulphur contained in Canada's reserves of sour natural gas of economic significance. The large tonnage of sulphur represented in the Canadian sour gas reserves places Canada in the position of being one of the three countries in the world having substantial reserves of economically recoverable sulphur.

In 1956 world consumption of sulphur in all forms totalled 14,916,000 long tons which was divided into 7,678,000 long tons of elemental sulphur and 6,800,000 long tons of elemental sulphur from pyrites. Today pyrites account for approximately 46% of world sulphur consumption compared to approximately 59% in 1937. This shift in use pattern emphasizes the desirability of elemental sulphur as a raw material for the production of sulphuric acid as compared to pyrites. This shift would have been even more pronounced had it not been retarded by the shortage of elemental sulphur existing from the beginning of World War 2 up until shortly after the Korean War ended.

Canadian sulphur consumption today is concentrated largely in the Provinces of British Columbia and Alberta in the west and in



Eastern Canada. The following table shows the estimated consumption of sulphur in the various areas of Canada today.

Use - Thousand Long Tons		Annual
<u>Province</u>	<u>Sulphuric Acid, Pulp and Paper</u>	<u>Total</u>
British Columbia	0	60
Alberta	50	3
Northwest Terri- tories	2	0
Saskatchewan	20	0
Manitoba	0	3
Western Ontario	0	40
Eastern Ontario	35	40
Quebec	35	50
New Brunswick	0	65
Nova Scotia	4	8
Newfoundland	0	35
<hr/>		
Totals	146	304
		450

Sulphur consumption in the areas of the United States which can logically be served from producing points in Western Canada is as follows:

1. In the States of Washington and Oregon approximately 225,000 long tons of sulphur are annually consumed in the pulp and paper industry.

2. Only minor quantities of sulphur are consumed in the Western States of Idaho, Montana, Wyoming and the Dakotas.

3. In the area bordering the Great Lakes approximately 1,100,000 long tons of sulphur are consumed annually for the production of sulphuric acid. In this same area approximately 80,000 long tons are consumed annually in the production of pulp and paper.



4. The remaining portion of the middlewestern United States consumes 375,000 long tons of sulphur annually.

From these figures it can be seen that there is presently a market for approximately two million long tons of sulphur in Canada and the United States that can logically be served from the Alberta plants, if rail freight rates which are competitive to these areas.

The current production of sulphur in Canada from the existing plants located in Alberta and British Columbia is being sold in the Western Provinces of Canada and the Pacific Northwest States of Washington and Oregon which provide an adequate market.

World consumption of elemental sulphur has shown an annual growth rate of 4.75% per year for the past 20 years. At the same time consumption of sulphur in the United States has shown an annual increase of 5.25% per year exceeding the increase in the Federal Reserve Board index of industrial production of 4.75% annually. Sulphur consumption in the United States is expected to continue to increase at this rate or at a somewhat greater rate in the period from now until 1965, while world consumption is expected to show a substantially greater rate of growth. Foreign consumption is expected to increase more rapidly



because of the discoveries of substantial sulphur reserves for both Frasch Process mining and from Canadian sour gas which assure the consumer a dependable long range source of supply. Since the end of World War 2 the growth rate in the consumption of elemental sulphur has been retarded by lack of assurance of adequate reserves and availability of supplies, and as a result of these uncertainties numerous acid plants were built throughout the world based upon the use of pyrites as a source of sulphur.



Take HH
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12/2

The recent discoveries of sulphur in Mexico and the construction of Frasch Process operations there have given an added impetus to the growth in consumption of elemental sulphur and this trend can be expected to continue in the future.

The following statistics from the U.S. Bureau of Mines are presented in support of these projections:

These are the statistical tables that start at page 6 of the submission. Would you like any of these figures read from the tables? The source of the information is the U.S. Bureau of Mines. The estimates on table I on page 6 for 1965 are our own estimates based on our studies based on world sulphur markets, and our projection on gross rate of consumption.

The rest of the tables are simply statistical tables on information on sulphur taken from the U.S. Bureau of Mines reports which are issued annually.

THE CHAIRMAN: Would you tell us, again, which are not the tables from the U.S. Bureau of Mines?

MR. LEWIS: On table 1, page 6, the column 1965 is estimated as our own estimate. The percentage figures, of course, that we calculated are compound figures. As a compound interest table



is figured, the percentages were not derived by merely taking the difference between the total of 1956 and 1946 but are the compound interest figures rate of growth.

THE CHAIRMAN: Table 2 is the U.S. Federal Reserve Board indices of production?

MR. LEWIS: Yes, that is from the Federal Reserve Board.

THE CHAIRMAN: And Table 3, sulphur production excluding United States.

MR. LEWIS: That is our forecast. The figures in 1956, the column labelled 1956, is from the U.S. Bureau of Mines. The figures in 1965 are our own.

In table No. 4, page 9, those figures are for 1965 and that is a breakdown of our production of sulphur and consumption; that is world-wide.

MR. FRAWLEY: Would Canada be in the foreign description?

MR. LEWIS: That table was lifted directly from a report we made in Houston and was not reworded.

MR. FRAWLEY: I do not like the use of the word foreign.

MR. LEWIS: That was an oversight, believe me.

THE CHAIRMAN: I think it is quite understandable. Table IA.

1890. 1891. 1892. 1893. 1894. 1895. 1896. 1897. 1898. 1899. 1900.

1901. 1902. 1903. 1904. 1905. 1906. 1907. 1908. 1909. 1910.

1911. 1912. 1913. 1914. 1915. 1916. 1917. 1918. 1919. 1920.

1921.

1922. 1923. 1924. 1925. 1926. 1927. 1928. 1929. 1930.

1931. 1932. 1933. 1934. 1935. 1936. 1937. 1938. 1939. 1940.

1941.

1942.

1943. 1944. 1945. 1946. 1947. 1948. 1949. 1950.

1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960.

1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970.

1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980.

1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990.

1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000.

2001. 2002. 2003. 2004. 2005. 2006. 2007. 2008. 2009. 2010.

2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020.

2021.

2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030.

2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040.

2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050.

2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060.

2061.

2062.

2063.

2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073.

2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083.

2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093.



MR. LEWIS: Table IA is from the U.S. Bureau of Mines. IIA is also from the U.S. Bureau of Mines and Table IIIA is also from the U.S. Bureau of Mines. Similarly for Table IVA, Table V and Table VI; they are also from the U.S. Bureau of Mines. Table VII is also from the U.S. Bureau of Mines.

THE CHAIRMAN: Thank you, Mr. Lewis.
Now, will you proceed?

Sulphur prices are traditionally stable and have shown very little increase percentagewise since the middle 1930's. Since the middle 1930's the price of sulphur increased from \$18.00 per ton to a high of \$26.50 per ton, and the present price is \$23.50 per long ton. This is an increase of only 30% over a 20-year period while the general price level for all commodities has more than doubled. Obviously Canadian sulphur must compete with Frasch Process sulphur from the United States and Mexico, and in order to sell in the world markets Canadian sulphur must be competitive not only on an f.o.b. plant or mine cost basis but also on a delivered cost basis.

Canadian sulphur is presently faced with competition of elemental sulphur from the Frasch Process Mines in the Gulf Coast of Texas and Louisiana and from the Isthmus of Tehuantepee in Mexico. In the future, in addition to the



competition of Frasch Process sulphur there will also be competition from sulphur produced from sour gas in other areas, such as the Lacq field in Southern France and in some areas in the Middle East.

The Frasch Process Mines in the Gulf Coast and in Mexico have an advantageous location near deep water for export shipments. In addition it has been the traditional policy of the United States railroads to grant export rates which are much lower than domestic rates, e.g. the domestic freight rate on sulphur from the various Texas mines to Houston is a maximum of \$3.22 per long ton while the export rate is \$1.51. At the same time sulphur can be shipped by bond through the inter-coastal waterway up the Mississippi River to the Great Lakes area where it can be transferred from the barges to lake steamers, railroad cars or trucks or delivery to the various consuming points.

This points out the need for export rates on sulphur from the Alberta producing points to the port of Vancouver and to some ports on the Great Lakes. Also a commodity rate structure on sulphur must be established to the various inland consuming points along the Great Lakes and Middle Western United States to place Alberta sulphur in a competitive position with sulphur produced in the Gulf Coast and in Mexico. There are substantial advantages to the railroads in establishing such



a rate structure, since sulphur for export could be shipped to terminals at Vancouver or along the Great Lakes in trainload quantities and stockpile for future loading of vessels. In addition to the export shipments, the movement from the Alberta plants by rail direct to consumers in Canada and the United States would represent substantial new tonnage for the railroads and a source of revenue not presently in existence. The anticipated sales to the Pacific Northwest area and the Great Lakes and Central areas of the United States would certainly aid in establishing a balance of trade between the two countries.

We cannot emphasize too strongly the importance of timing in these developments. Off-shore reserves of sulphur have been discovered along the Texas Gulf coast, and with the continuing oil exploration program offshore, additional reserves are sure to be found. One of these deposits is scheduled to come into production in 1961 or 1962.

Present sulphur reserves in Mexico would support today additional mining facilities and the continuing exploration program in the Isthmus of Tehuantepec will undoubtedly develop additional reserves. With the continuing increase in worldwide consumption of sulphur it will be necessary to bring into production new sources of



supply, and if we fail to take advantage of this opportunity some of our competitors in the Gulf Coast or in Mexico undoubtedly will do so.

Once such an operation is established and is serving the various markets it is difficult for the newcomer to break in, and he must either wait until additional demand develops to absorb his production or must make concessions in order to induce the users to switch suppliers, e.g. the Mexican producers were forced to grant price concessions of as much as \$5.00 to \$6.00 per ton in order to break into the market when they commenced their operations in 1954 and 1955.

It is essential that sulphur produced as a by-product from gas in Alberta be marketed at a price which will cover the cost of gathering the sour set gas, the cost of processing, and a return on the large investment in plant facilities.

If the sulphur is not marketed at such price then, since gas can only be marketed after sulphur has been removed, the cost of removing the sulphur, cost of storing the sulphur for future sale and the payment of a return on the investment in the plant all must be charged against the price received for the gas as a fuel. This, in turn, will restrict the amount of money available for gas development. It will also render a great deal of potential gas reserves of Western Canada



uneconomic in the sense that they cannot be developed on the basis of the sale of gas at a price which will recover the cost of production plus a reasonable profit to the producer.

There is a great deal to be gained by Canada in proceeding without delay to secure for Canada markets for the gas to be produced in Western Canada at favourable prices. This will mean that the sulphur plants can be erected and the sulphur available for marketing within two years. At that time this sulphur will have the best opportunity to obtain the markets within reasonable distance of Western Canada. Otherwise sales in such markets will be met by competition from other sources where production of sulphur is now planned.

Speaking specifically with respect to the Jefferson Lake Sulphur Company plant at Taylor, British Columbia, it is the opinion of the officials of the company that a market can be established for the sulphur produced from that plant in competition with sulphur from competitive sources.

Similarly, it is the opinion of the officials of the Jefferson Lake Company that if the plants are proceeded with without delay the sulphur from plants proposed to be constructed at Calgary and at Coleman, Alberta, can be marketed at favourable rates in the face of competition from other sources.



Delay in the completion of plans, however, for the construction of the two proposed plants in Alberta will undoubtedly be prejudicial to efforts at a later date to find a market for the product of the plants.

That completes our submission, Mr. Chairman.

THE CHAIRMAN: Thank you very much indeed, Mr. Lewis.

MR. LEWIS: Thank you for the opportunity to appear.

THE CHAIRMAN: We are glad to have you.

MR. PATTILLO: Mr. Lewis, would you mind being sworn?

MR. LEWIS: Certainly not.

---Francis Edgar Lewis, duly sworn.

MR. PATTILLO: Mr. Chairman, as we only have fifteen minutes before our normal adjournment time, that is, if we have to adjourn strictly on time and, although, as it is probable Mr. McDonald will be here in the morning and he is not here now, I would suggest, if it is agreeable to the other counsel concerned, that we do not start the cross-examination until the morning.

THE CHAIRMAN: I think it would be very awkward, Mr. Pattillo, to commence now when we only have ten minutes or twelve minutes to go. Under



the circumstances, gentlemen, I think we will adjourn until tomorrow morning at 9.45.

MR. MacKIMMIE: Mr. Chairman, Mr. Pattillo has advised me of the possibility of being reached on Thursday, and because I have some witnesses I want to be available, may I take it now we will be reached on Friday?

MR. PATTILLO: We can never say definitely, Mr. MacKimmie, but I can say now the chances will be very good.

---Whereupon the hearings adjourned at 4.15 P.M. until 9.45 A.M., Thursday, February 13, 1958.

Mr. Gordon

ROYAL COMMISSION

ON

ENERGY

HEARINGS

HELD AT

CALGARY,

ALTA.

VOLUME No.:

8

DATE:

FEB 13 1958

OFFICIAL REPORTERS

ANGUS, STONEHOUSE & CO. LTD.

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C O R R I G E N D U M

At pages 1234 and 1235 the words "Northern Fields"
should read "Northern Foothills".



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TORONTO, ONTARIO

ROYAL COMMISSION

ON

ENERGY

Hearings held at Calgary,
commencing Monday, February
3, 1958, at 10.00 A.M.

PRESENT:

| | | |
|-----------------------------|----|----------|
| Mr. H. Borden, C.M.G., Q.C. | -- | Chairman |
| Mr. J.L. Levesque, | -- | Member |
| Mr. G.E. Britnell, | -- | Member |
| Mr. G.G. Cushing, | -- | Member |
| Mr. R.D. Howland, | -- | Member |
| Mr. L.J. Ladner, Q.C. | -- | Member |
| Dr. R.M. Hardy, | -- | Member |

COMMISSION COUNSEL:

Mr. A.S. Pattillo, Q.C.

Mr. Miles H. Patterson.

Mr. J.F. Parkinson -- Secretary to the
Commission.

Major N. Lafrance -- Assistant Secretary
to the Commission.



APPEARANCES:

Representing Westcoast Transmission Company Limited; Pacific Northwest Pipeline Corporation and El Paso Natural Gas Company; and Jefferson Lake Sulphur Company.

| | | |
|-------------------------|---|--|
| Mr. E.J. Chambers, Q.C. | - | Counsel |
| Mr. Webster McDonald | - | Associate Counsel |
| Mr. D.P. McDonald, Q.C. | - | Managing Director
of Westcoast Trans-
mission Company
Limited |
| Mr. C.R. Hetherington | - | Vice-President of
Westcoast Transmis-
sion Company Limited |
| Mr. Coleman R. Sample | - | Ford, Bacon & Davis,
Inc. |
| Mr. Paul Kayser | - | Chairman of the Board
of Pacific Northwest
and President of El
Paso Natural Gas Co. |
| Mr. F.E. Lewis | - | Vice-President and
Assistant to the
President of El Paso
Natural Gas Co. |

EXHIBITS

Page

| | |
|--------|---|
| C-13-1 | Economics of Marketing
Peace River Gas in the
Western United States |
|--------|---|

1255



Thursday,
February 13, 1958.

---On resuming at 9.45 a.m.

THE CHAIRMAN: The Commission will now resume its hearings.

MR. PATTILLO: Mr. Chairman, you will recall that yesterday Mr. Chambers, counsel for the company, mentioned some evidence that they wished to put in as part of their case relating to the City of Calgary's brief and we did not do that yesterday, so I have agreed with Mr. Chambers that, before any examination of the witnesses is commenced by myself, that that evidence should be put in as part of their main submission.

THE CHAIRMAN: That is perfectly in order.

MR. CHAMBERS: I have the idea of putting it in by way of questions to Mr. Hetherington, who has been sworn.

CHARLES RAY HETHERINGTON, already sworn

BY MR. CHAMBERS:

Q. Mr. Hetherington, you are familiar with the submission of the City of Calgary, Exhibit C-7-1, which is this yellow booklet, and then there is Exhibit C-7-2, which is the white book marked "Material Filed on Behalf of the City of Calgary Respecting Export of Natural Gas from the Province



of Alberta Before the Oil and Gas Conservation Board."

You are familiar with that?

A. Yes, I am familiar with those exhibits and I heard the testimony of Mr. S. J. Davies.

Q. As I understand it Westcoast Transmission Company Limited is in agreement with certain of the propositions presented by the City of Calgary but that you are not in agreement with those propositions advanced by the City as to how the City can best be supplied?

A. That is correct. We do not feel that the proposal of Mr. Davies for obtaining future supplies of gas are practical.

Q. Mr. Hetherington, I direct you to what I think is Point No. 5, where Mr. Davies states that the sweet gas reserves of the province are limited and that they should, in general, be reserved for Canadian consumption. Then, in Point No. 7, he states that the export of natural gas should be based on gas from high hydrogen sulphide content reserves.

Would you give the Commission your thinking on that?

A. I believe that it is reasonable to reserve sweet gas supplies for Canadian consumption. On the one hand, sweet gas is a very valuable supply for local requirements here in Alberta, having regard



to the nature of the market. It provides an ever-ready supply with minimum investment in production facilities, and local consumers are not involved in the investment in expensive gas processing plants nor in the marketing of plant by-products. On the other hand, sweet gas is of little difference than sour gas to an export pipeline which has a relatively high load factor market demand and which is in a position to invest money in processing plants. In fact, sour gas can be more valuable than sweet gas in certain instances where the by-products can be marketed at a profit.

By reserving the sweet gas fields for local consumption, export markets are not unduly penalized by being restricted to the sour gas fields.

Accordingly, I see nothing wrong with the suggestion, in general, that sweet gas reserves should be held for Canadian consumption, providing, of course, that the producer is not discriminated against and obtains a competitive price for his product.

MR. PATTILLO: Mr. Chambers, we have excellent reporters but they would have to be right from Heaven to be able to take it as fast as you are giving it.

THE WITNESS: Thank you.

In negotiations with our United States customer companies, we have expressed this particular



thought to them and our companies in the United States recognize this condition and they are willing to consider that the gas supplies available for export will come from sour gas sources and they are willing to pay the cost of extracting sulphur as part of the price of natural gas if the revenue from sulphur does not cover the costs.

Our agreement with Pacific Northwest Pipeline Corporation for the purchase of gas from southern Alberta provides that the plants and the pipelines will all be lumped together and that we will be given a $7\frac{1}{2}$ per cent rate of return on the overall investment after crediting any revenue that we do get from the sale of sulphur. If the market for sulphur is favourable, the cost of gas would be decreased a little bit. If the market is unfavourable, the cost will go up a little bit.

In our proposal presently before the Conservation Board, if we were not able to sell any sulphur from the Calgary plant, the cost of all of the gas that we propose to sell would be increased about $2\frac{1}{2}$ cents per Mcf or approximately 10 per cent.

Now, it is possible that sulphur prices will decline further and that the sale of sulphur may be slow for a few years. However, it is highly improbable that we will not sell any sulphur from Alberta production and, accordingly, we would



not look unfavourably upon the placing of certain limitations upon increases in gas price resulting from the lack of sulphur sales.

To my knowledge, Westcoast is the only company that is in the position, by virtue of these arrangements with its export market, to guarantee the operation, on an economic basis, of sulphur plants for the production from sour gas fields in Alberta.

MR. CHAMBERS: Q. Mr. Hetherington, I would like you to direct your attention, for a moment, to Points 2 and 8 in the City's exhibits I have referred to and which contain these words:

"All gas fields adjacent to
"Calgary, or adjacent to the
"transmission lines of the
"Canadian Western Natural Gas
"Company should be dedicated for
"the future use of southern Alberta
"consumers of gas" and "present
"proven reserves of natural gas
"adjacent to Calgary should not
"be included in any export permit.
"Exhaustion of these reserves mean
"that more new reserves must be
"found a greater distance from
"Calgary, with corresponding
"higher cost to consumers of gas
"in Calgary and southern Alberta."



Would you give us your view as to those statements?

A. I agree with the results that Mr. Davies is trying to achieve but I do not agree with the proposed method of achieving the same.

For example, the sour gas in the Cross-field formation of the Calgary field, which is under contract to Westcoast, is of absolutely no value to Calgary without a very expensive processing plant, which cannot economically be supported by the relatively small and low load factor demand of the Calgary market.

Before Westcoast contracted for the East Calgary gas, both Jefferson Lake Sulphur Company and myself discussed the matter with officials of Canadian Western; and Canadian Western, of course, declined to purchase the gas for their own use. Even after Westcoast had this field under contract, the low sulphur content gas from the Elkton formation was offered to the gas company as an alternative to their Carbon project. The gas company made a thorough analysis and concluded that the cost per unit of gas available was about the same as the Carbon project and that the Calgary gas would meet their requirements for only a few years and the cost per Mcf of gas available to them would be about the same as the Carbon project.

So, accordingly, the project was not as



attractive as the long range Carbon project. That is, the East Calgary gas was not as attractive as the long range Carbon project and they turned us down. If the Calgary field is reserved for local use and is not included in an export permit, it is improbable, in my opinion, that this field will ever be used.

Q. Mr. Hetherington, I would like to direct your attention to the following statement which appears on the transcript at page 706, where Mr. Willson, who was speaking for Canadian Western, made this statement. He says:

"In June of last year we attempted
"to enter into a contract with
"Jefferson Lake Sulphur Company
"for the East Calgary gas but
"they decided to enter into a
"contract with Westcoast rather
"than us."

Now, if you have any knowledge, any first-hand knowledge of the facts would you please tell us?

A. Yes. As previously stated both Jefferson Lake and myself had discussions with officials of Canadian Western as to whether they would contract and be able to use the Calgary field gas. Mr. H. W. Manley, Vice-President of Jefferson Lake Sulphur Company, talked with Mr. Bruce Willson and I talked with Mr. Dennis Yorath.



These gentlemen told us that they could not use the gas for Canadian Western.

In June of last year, when Jefferson Lake and Westcoast were finalizing the contract for the purchase of the Calgary field gas, Alberta and Southern and the gas company met with Jefferson Lake in an attempt to get the contract for Alberta and Southern. When Mr. Willson uses the word "we" on transcript page 706, he can only mean Alberta and Southern, for certainly the gas company was given every prior opportunity to buy the gas for their own use and they turned it down.

Q. Now, Mr. Hetherington, you have said you agree with what Mr. Davies is trying to achieve in making gas available from the fields in the vicinity of Calgary but you disagree with his means for achieving this end, and you have already described to the Commission the application of Westcoast before the Oil and Gas Conservation Board to take gas from southern Alberta.

Will you now explain to the Commission why you think that the Westcoast proposal is better than the plan of Mr. Davies and better than the plan of Alberta and Southern?

A. You will recall, from my testimony, that Westcoast plans a sour gas gathering system from the fields in the vicinity of Calgary and a central processing plant to make all of this gas



merchantable. Initially Westcoast will sell the production from this plant at high load factor in its export market and, as the local market requires an increase, Westcoast will contract to sell this gas for local consumption; and I showed, in my presentation, how the future requirements for base load gas can be supplied through this proposal of Westcoast.

Under this scheme, all of the gas from the fields in the vicinity of Calgary can economically be made available for use by local consumers without the need to reserve these fields exclusively for local use. I gave evidence and submitted cost statements showing that the cost of this gas would be about 18 cents per Mcf, very near Calgary's doorstep.

Now, I have analyzed Mr. Davies' plan as set forth on the deliverability table at the back of his Exhibit, No. C-7-2, and it is my estimate that to obtain an equivalent volume of gas under the Davies' plan from the Sarcee-Calgary-Harmattan-Elkton-Sundre area would cost in excess of 32 cents per Mcf, from those fields which I have named. You simply cannot operate expensive pipelines and plant facilities at a 30 per cent load factor and end up with a reasonable cost.

Now, the Westcoast plan, as I have said, contemplates, and we estimate, from the facilities



we propose and the field prices that we have contracted and proposed, that gas from our system would cost about 18 cents. You will hear later from Alberta and Southern, and I probably should not go into this testimony, but you will find, when you look at their figures, that their figure will be something in the range of 22 to 25 cents for the same service, based on the exhibits that they have already filed before the Conservation Board.

Now, we feel at Westcoast that the proposal that we have will develop the fields in the vicinity of Calgary. Our export markets will take this gas and permit the development, on an economic basis, at high load factor. As the gas is used for Calgary, it will be made available, under contract by our Alberta company, Westcoast Transmission Company (Alberta) Limited under arrangements which will be guaranteed by the parent company and, accordingly, I feel the Westcoast proposal is the best means for supplying gas to Calgary on an economic basis.



THE CHAIRMAN: Mr. Pattillo?

MR. PATTILLO: I would like to call

Mr. Paul Kayser.

PAUL KAYSER, previously sworn

BY MR. PATTILLO:

Q. Mr. Kayser, you told us yesterday that you had been the chief executive officer of El Paso since 1928. Was that when the company came into being?

A. Yes, sir, that was when it was organized.

Q. And prior to that time had you been in the natural gas business?

A. Yes, I had participated in the organization of another company, but to a much smaller extent.

Q. And looking at the map that you have been kind enough to file with your exhibit at the back, was the El Paso company's distribution system in 1928 from the fields in Texas as far as the take-off point of the Southern California Gas Company, or how far did it go at the commencement?

A. The company was organized in 1928. It began construction of a 16-inch line from the field at the extreme bottom of the map -- the shaded portion which we know as the Permian basin. It



started at a little place called Jal; you will see it in the middle of the map.

Q. Yes?

A. It was a 16-inch line, 205 miles to El Paso, Texas, and that was built and put in operation on June 19th, 1929.

Q. Yes, and in what year did it eventually get across to the line of the Southern California Gas Company?

A. When?

Q. Yes.

A. That occurred in 1947.

Q. And was that the first entry into California, or had you hooked up with the P.G. & E. before that?

A. No, that was the first entry. That was the contract with the Southern California company, and it provided for the delivery of 305 million feet of gas to a point on the Colorado River where those connections are shown in the extreme left hand lower corner of the map.

Q. And in what year did you hook up with the P.G. & E.?

A. I think that was in 1950. We had been negotiating with them in 1948 and 1949, but I think the first delivery occurred in 1950, and that was at the connection immediately north of the connection to the Southern California company, on the



Colorado River likewise.

Q. Now, is El Paso, like Westcoast Transmission, a transmission company only or is it also in the producing business?

A. It is in the producing business as well as in the transmission business.

Q. Does it acquire any gas from independent producers, or does it produce all its gas?

A. It only produces about 10 to 11 to 13 per cent -- I believe 13 per cent is the highest amount we have ever produced of our own gas. We buy all the rest from independent producers, meaning by that those distinguished from producers who own pipelines.

Q. Right.

A. It includes the so-called majors as well as the conventional independent oil producers.

Q. I am just directing my question to the situation that existed before Westcoast Transmission began delivering any gas into the United States. At that stage, dealing with the gas that you were getting from these independent producers, did all of the contracts that you had with them contain escalation clauses relating to the prices that they were to pay?

A. I think that that is correct.

Q. Now, in 1954, I think it is, when Pacific Northwest Pipeline Corporation came into



being -- or, was it 1952?

A. It probably was organized in 1952.

Q. And did El Paso have any share interest in that corporation at the time of its corporation?

A. No, sir.

Q. Was El Paso's first share interest in that company acquired in 1956, when you mention that it acquired 99 point something per cent?

A. Actually, it acquired it, I believe, in 1957, but it might have been -- yes, it was 1957; January, 1957, I think is correct. That is the first time we owned any stock in the Pacific Northwest Corporation.

Q. Yes, and prior to that time did Pacific Northwest own any stock in El Paso?

A. No.

Q. Now, there is a gentleman that we are probably going to hear something about by the name of Fish. What is Mr. Fish's name?

A. Mr. Ray C. Fish.

Q. And where does he live?

A. He lives in Houston.

Q. And Mr. Fish had what to do with the original incorporation of Pacific Northwest?

A. He was the leading spirit, you might say, in the development of that company.

Q. Right. Now, it was the Pacific North-



west Company, was it, that opposed the application of Westcoast Transmission Inc. before the F.P.C.?

A. Well, I was not a part of that proceeding, but it is my understanding, not from investigation or personal knowledge, that that is correct.

Q. Well, can you tell me this: If it were not for the gas that Pacific Northwest obtained from Westcoast Transmission--from your knowledge of the operations of Pacific Northwest, how long did the other supplies which it had under contract when you came into Pacific Northwest -- how long would those supplies permit the operation to continue, approximately?

A. Well, I think those supplies, as subsequent drilling has shown, will run for a 20-year period.

Q. For their full operations, and they will be able to meet all the demands of their take-off distributors?

A. Yes, but it will be a tight fight. Now, I would like to modify that to this extent, that I think, as I testified yesterday, that the area served by Pacific Northwest is going to experience a very rapid and substantial growth, and I would not be willing to say that I think the points connecting the areas in the United States to those markets would be sufficient over a 20-year period



to supply their growth. I think that calculations would show today that the present deliveries, even for a 5-year period, might be supplied from those areas, but, as I say, it would be a tight proposition.

Q. And at the time that the F.P.C. preferred the application of Pacific Northwest from your knowledge as the present chief executive officer that company did not then have private reserves that could permit it to supply its customers for a period of more than 3 to 5 years, did it?

A. No, I would not say that. The Federal Power Commission conducted extensive hearings on the granting of that certificate, and granted the certificate after a great volume of evidence. As I said, I was not a party to that proceeding, but I know a substantial amount about it, and I am sure -- I would like to add this -- I am sure that the potential of the Rocky Mountain area was taken into account along with the proven reserves as the basis of granting that certificate by the Federal Power Commission.

Q. Now, I will deal with that, perhaps, with Mr. McDonald, who may be more familiar with it because of his association with it at that time. Now, in 1954 after the F.P.C. had preferred the American Pacific Northwest Corporation to Westcoast Transmission Inc. an agreement was entered into



between Westcoast Transmission Company and Pacific Northwest. Do you know, as the chief executive officer of Pacific Northwest, whether it was at that time that Pacific Northwest got a share interest in Westcoast Transmission?

A. Yes, sir, that is correct.

Q. And do you know what they paid for it per share?

A. I do not know for sure, but they paid the initial price that others paid upon the organization of the company. That is my understanding.

Q. Right. Now, do you know whether or not Mr. Fish got any shares in Westcoast Transmission at that time?

A. I do not think he did.

Q. Did El Paso?

A. No.

Q. Did you?

A. No.

Q. Does El Paso own any shares in Westcoast Transmission today?

A. Yes.

Q. When were they acquired?

A. They were acquired at the last part of last year -- I believe in November; possibly, October -- from Pacific Northwest.

Q. From Pacific Northwest?

A. Yes.



Q. So that the original holding of Pacific Northwest is now transferred over to El Paso?

A. No, only a small number of shares. The exact number I do not remember.

Q. Right. Now, when did El Paso first acquire any gas holdings in Canada?

A. About three years ago. I think that is accurate.

Q. And in what area? In the Peace River area?

A. In the Peace River area at that time. We have subsequently taken some farm-outs along with other associates in Alberta, and we are drilling a couple of wells in Alberta now.

Q. In the south part of Alberta?

A. Yes, sir.



Q. In connection with Westcoast Transmission brief on the top of page 33 -- ?

A. Yes, sir.

Q. It is stated that Northwest has four contracts for the purchase of natural gas with producers in British Columbia?

A. Yes, s.r.

Q. And the first and most substantial one is Pacific Petroleums Limited. Has El Paso any share interest in Pacific Petroleums Limited?

A. No, sir.

Q. Has Pacific Northwest?

A. In Pacific Petroleums Limited, no.

Q. Have you?

A. No.

Q. In Phillips Petroleum Company, have you any share interest in that company?

A. No.

Q. Has El Paso?

A. No.

Q. Has Pacific Northwest?

A. I do not know. I do not think so.

Q. The holdings of J. B. White, A. M. Lloyd et al; is et al El Paso?

A. El Paso -- no; Gulf States Oil Company which is a wholly-owned subsidiary of Western Natural Gas; Western Natural Gas is an associated company of El Paso. I own substantial stock in



Western Natural Gas and El Paso owns substantial stock in Western Natural Gas and I am the chief executive officer of Western Natural Gas and the two companies together own a **substantial** part of the Blueberry permit. I am mistaken about that, El Paso does not own any interest in the Blueberry but Western does and I believe it is in the range of 20-21 per cent and it is part of the associates of J. B. White. El Paso owns a half interest in the Gundy Creek operation and is a party to the contract that is shown there for five million with Westcoast.

Q. May I put it this way: looking at these four producers in British Columbia, so far as you know the only ones that would be independent of Westcoast Transmission, El Paso or Pacific Northwest would be Phillips Petroleum Company and J. B. White and A. M. Lloyd?

A. Would be independent of Westcoast?

Q. Of Westcoast, El Paso or Pacific Northwest?

A. Well, let me state it this way: as far as I am concerned, I regard Western as independent of Westcoast.

Q. Well, Western, as I just understood it from you, was controlled by El Paso and yourself?

A. That is correct but I want to state this now: Westcoast is independent of El Paso and



El Paso is independent of Westcoast.

Q. That is something we are trying to pry into, Mr. Kayser.

A. I am willing to address myself exactly to that.

Q. Would you just look down at the bottom of page 33?

A. Yes, sir.

Q. This is where the five contracts that West Coast (Alberta) has for the purchase of natural gas with producers in Alberta. Again, we have Pacific Petroleum and then Pacific Petroleum and Westcoast Production Company Limited, then we have Imperial Oil Limited, Pathfinder Petroleums Limited. Do you know anything about Pathfinder Petroleums Limited?

A. No, except that I understand it is an independent company operating in Canada.

Q. You do not know anything about ---

A. I am not familiar with their internal organization.

Q. El Paso has not any share interest in it?

A. None whatsoever; I would like to go back and say, at the time those contracts were executed, at the top and bottom of the page, El Paso had no interest in Pacific Northwest and, consequently, no interest in Westcoast.



Q. I appreciate what you have said, Mr. Kayser, and I will give you lots of opportunity to explain anything later and it just throws my continuity of thought.

A. I am sorry.

Q. Now, since the contract with Pacific Northwest, up to the present time, what acreage has been acquired by either Pacific Northwest or El Paso in the Peace River district? Can you give us that, approximately?

A. Yes, Pacific Northwest does not own anything in the Peace River district; El Paso and Western, since the acquisition of the stock of Pacific Northwest by El Paso -- is that the question?

Q. No, I am saying since 1954, since the contract.

A. Well, El Paso and Western have acquired, since 1954, substantial acreage in the Peace River district by farm-outs and by -- principally by farm-outs, I believe.

Q. And have attempts been made to purchase from producers who have made discoveries of gas in the ground?

A. Yes, I have negotiated, actively, for the purchase of gas in the ground in the Peace River area.

Q. And is the reason for that, Mr. Kayser, so that the supplies of Westcoast Transmission



Company in the future would be assured without there having to be any increase in the price paid to the producers under the favoured nation clause?

A. The reason for it was the desire on the part of El Paso to develop and own the largest amount of reserves, particularly those that could be reserved at a substantial distance down the future, to supply its markets. Now, so far as influencing price, I would not want to say we had that idea at all in the acquisition of these reserves.

Q. Will you agree with me it could have that result?

A. The ownership of those reserves of El Paso?

Q. The acquisition of gas in the ground in quantities to have the result the supplies needed by Westcoast Transmission would be made available without any increase in price to the producers under the favoured nation clause?

A. I am going to answer that in part form: We recognize, if you are going to get the volumes of gas that are needed for your operation, you are going to have to pay an increasing price. We did not carry out any of our transactions on the basis of trying to influence price. Our main object is to acquire reserves, particularly those that can be useful in the future as the flush production may have been taken off from those fields that are now



producing. I do not know that the acquisition of those reserves would have any influence upon the price that Westcoast would acquire gas in the Peace River area.

Q. Now just let me go back again, Mr. Kayser, and see if we can get this thing straightened out. You are quite familiar with what I call the favoured nation clause in producers' contracts?

A. Yes, sir.

Q. Do you agree with me that if people buy gas in the ground that does not affect the favoured nation clause between producers?

A. I think that is correct.

Q. And do you agree with me that if El Paso could acquire enough gas by buying it in the ground and then it chose, later, to sell to Westcoast Transmission for delivery in its own systems, the gas, at prices presently prevailing with the independent producers, then there would be no change whatever in the favoured nation clause and the independent producer would not get more?

A. That could result.

Q. That is all I want to know, thank you.

A. I would like to qualify it a little bit.

Q. All right, go right ahead; I am



sorry.

A. Only to the extent of the gas actually owned by El Paso. All of its associates would have a right not to deliver. El Paso has not even had an opportunity to acquire any gas in Canada and very little that I know anything about over the independent system except in connection with associates.

Q. Would this be fair so far as this Western Company is concerned of which you spoke: you and El Paso have sufficient shareholdings to be able to vote your shares requiring it to do whatever you see fit?

A. No, sir.

Q. You have not got that?

A. You bet your life we do not have that because where you have one share outstanding that share can take you into the court house and make you pay a price that is commensurate with what should be paid, otherwise ---

Q. Well, we will not get into the law. What is the share of El Paso and yourself in Western?

A. I think it is 20 per cent; the two of us together in the range of 30 per cent.

Q. I assume you are on the board?

A. Yes.

Q. And are the other representatives from El Paso?



A. I think -- the majority of the board is not from El Paso. I believe there are three.

Q. Do you agree with me that in considering the advisability of export of natural resources such as natural gas from Canada to another country, one of the first things that should be determined is whether there are sufficient of those reserves to supply Canadian needs?

A. I have no misgiving on that and no reservations about that whatever. I think it is absolutely necessary.

Q. And do you agree with me that in exporting that surplus, whatever it may be, it is also most desirable to see that the best price is obtained that it is possible to obtain, in fairness to the Canadian who is disposing of the asset?

A. There is no question about that. It belongs to you and you should sell it at a price that is satisfactory to you.

Q. Right. Now, do you know of any gas contract in the United States similar to the contract between Westcoast Transmission and Pacific Northwest where there is an escalation clause for the whole 20-year lifetime of the contract?

A. Yes, sir; there are a number of contracts like that.



Q. There are a number of contracts like that?

A. Yes.

Q. Negotiated in recent years?

A. No, sir.

Q. Let us put it this way: do you know of any contract since 1954, since January 1st, 1954, negotiated for the delivery of natural gas by companies such as Westcoast Transmission that do not contain an escalation clause?

A. I do not.

Q. Now, I am reading from page 9 of the prospectus of Westcoast Transmission Company Limited, dated September 11, 1957, and I would like you, Mr. Kayser, to explain, if you would, this statement:

"The company . . ." --
that is Westcoast. Have you got it so you can follow it? It is September 11, 1957, page 9, towards the bottom of the page, about seven lines from the bottom.

"The company . . ." --
that is Westcoast Transmission.

" . . . understands that the gas
"which Pacific Northwest will pur-
"chase from it will be sold by
"Pacific Northwest to El Paso and
"other customers on Pacific North-
"west pipeline system and that,



"under the arrangement with El Paso,
"the gas purchased by El Paso will
"be immediately re-delivered at the
"point of delivery near the inter-
"national border to Pacific North-
"west in exchange for a like amount
"to be delivered to El Paso at a
"point in Colorado."

Now, do I read that correctly, in thinking
that the first step after Pacific Northwest gets this
gas is that it sells part of it to El Paso?

A. Yes, sir.

Q. The second step is that El Paso
sells back that amount to Pacific Northwest?

A. No, sir.

Q. That is what it says, doesn't it?

A. No. We deliver back to them in
exchange for a like delivery at the point in Colorado.

Q. Well, I find that a little difficult
to follow and would you please explain the signifi-
cance of that and why it is done that way?

A. Well, the reason for doing it was
that the Pacific Northwest and El Paso had connec-
tions in the Ignacio field in Colorado and the San
Juan basin, because we were both taking gas out of
that basin.

Now, we wanted to buy Canadian gas and it
was necessary for El Paso to buy part of the gas



that Pacific Northwest was to buy from Canada in order that Pacific Northwest be able to take the large quantity that they did, namely, 300 million, and, in order to effectuate it on the basis of an exchange of gas, we bought the gas at the border and exchanged it with Pacific Northwest for a like quantity in the San Juan basin.

We discussed the matter with the Federal Power Commission at the time that we made such arrangement and that arrangement was considered to be in line with other practices in the Federal Power Commission.

Q. Well, now, Mr. Kayser, I assume that Pacific Northwest requires so much gas a day and per year to supply its customers and it really is not concerned from which source it gets it, is it?

A. Yes, because the price paid for Canadian gas was greater than the price paid for the San Juan basin.

Q. It is better?

A. Greater.

Q. So if it could buy more gas from the San Juan basin and you would take some of the Canadian gas--if you could not get the quantities from the San Juan basin you would have to use as a supplement -- it would result in a levelling off of the prices both of you were paying, is that it?



A. It would help them in the purchase of Canadian gas. That was the purpose of it.

Q. I see. Now, is there any escalation clause in the contract between you and Pacific Northwest regarding the prices to be paid for this Canadian gas?

A. I don't think there is.

Q. Do you know?

A. I am quite sure that, as to that contract, there is none. Under the Federal Power Commission regulations, however, if the price of that gas increased at the border, we would be required to pay the increased price.

Q. Now, where is this gas that is being supplied to Pacific Northwest by Westcoast Transmission being used?

A. Physically, it is being delivered to the customers in Washington and Oregon.

Q. I would like you to look at the Westcoast Transmission brief, page 47, commencing at the last paragraph:

"After extended negotiations with
"the distributing companies in
"California, and later with the
"officials of the El Paso (the
"supplier of gas to the California
"Gas Companies), and the officials
"of Pacific Northwest, it was



"determined that the economic value of
"Canadian gas delivered at San Francisco
"was approximately 34c per Mcf on the
"basis of a 90% load factor. This value
"was established in San Francisco by the
"delivered cost of gas at San Francisco
"from Texas and Arizona and the competi-
"tive value of Bunker fuel oil available
"for industrial purposes in the San
"Francisco Bay area.

"Since the demand for gas which
"created the market for Canadian gas was
"in the State of California the price of
"gas exported from Canada necessarily
"reflected the cost of moving the gas from
"the international border through the
"facilities of Pacific Northwest plus
"the cost of moving the gas from a point
"on the Pacific Northwest pipeline near
"Boise, Idaho, through a proposed pipeline
"to be built by El Paso from Boise, Idaho,
"to the vicinity of San Francisco. The
"charge established for the use of the
"facilities of Pacific Northwest was 3c
"per Mcf. The cost of delivering the
"gas from Boise, Idaho, to a point in
"the vicinity of San Francisco was
"estimated at 9c per Mcf. As a result,



"since the competitive value of gas
"transmitted from Texas and Arizona
"fields to San Francisco was 34c per Mcf,
"the net value of Canadian gas at the
"international border was 34c less 12c,
"namely, 22c per Mcf."

Now, it is correct, is it not, that there
is no pipeline communication from Boise to San
Francisco?

A. That is correct, but at the time ---

Q. Now, just let me ---

A. All right, go ahead. Excuse me.

Q. It is correct that none of the
Canadian gas is going to San Francisco, specifically
going to San Francisco?

A. No, no, that is correct. I do not
think that it is. At the present time I am sure that
it is not.

Q. Now, if 34 cents is the laid-down
price at San Francisco of Texas gas, if you wanted
to find out the laid-down price of the Texas gas
at the Canadian border you would add 12 cents
rather than taking off 12 cents, wouldn't you?

A. Add it to what?

Q. To the 34 cents. If it cost 12
cents to bring it to the border in one way, it must
cost 12 cents to get it the other way.

A. That does not necessarily follow,



Mr. Pattillo.

Q. Will you show me where my mathematics are wrong?

A. Let us take it, first, on the basis of physical delivery. If you take gas in at the border ---

Q. Let us talk about the Texas gas first, because that is what I want to get first, the physical delivery of Texas gas up to the border, right up to the Canadian border.

A. Well, now, look, excuse me for saying so, but there is no basis for making that calculation at all.

Q. Well, you made it for the price in San Francisco of 34 cents and you knew no Canadian gas was going to go into San Francisco.

A. Well ---

Q. Isn't that so?

A. Yes, I know; but it doesn't have the result that you are driving at. I want to give you the practical side of it.

Q. So do I want that, and I do not pretend to be an expert in the gas business.

Would it cost more to put Texas gas at the Canadian border than to San Francisco?

A. It certainly would.

Q. All right. Now, if we are talking about competition of gas with Canadian gas at the



border, can you tell me how in the name of heavens you talk about San Francisco?

A. Well, if I may be permitted to tell you what the economic facts are that we are driving at, the market at San Francisco and otherwise in California was a market to be supplied with gas from many sources. Now, if the Canadian gas is to come into that market, it must come in on a basis comparable to the other sources; that is, comparable in price to the price that would have to be charged if you brought the gas in from other sources.

Consequently, that was a problem that we had to deal with.

Now, frankly, if you will let me just give you these thoughts, if you took the cost of sales from the border at Sumas, or Huntingdon, as you put it, on your side, and move that gas, physically, to San Francisco, there was no way to do it when you had to bring it from the Peace River down to the border; no way to do that and charge the full cost of sales from the Peace River to San Francisco and arrive at any price where you could use that gas in the San Francisco market versus gas that could be delivered from Texas, New Mexico and Colorado.

Consequently, we conceived the idea that it would be fair, because we considered it necessary to have some excess to the reserves of Canada to support the market in the Pacific Northwest as



well as the other markets on the west coast -- we conceived the idea of an exchange, in which we would get Pacific Northwest (and they did agree to it) to take the gas at the Canadian border, let us pay the full price at the Canadian border and they get a simple 3-cent exchange in addition, and deliver that gas to us at this point where we would take it, near Boise, and then we were to build a pipeline from that point over to the border of California and make delivery.

Now, in that way we did arrive at a price which we considered, under all the circumstances, should be satisfactory from the standpoint of the market; not that it met the price exactly, because it does not, and it does not now in our proposals; but it came close enough to it to justify the removal of the gas.

Now, this means taking the 22 cents plus the 3 cents, plus the cost of transporting it through a new pipeline from Boise to the market of 9 cents. That total of 34 cents delivered to California was sufficiently competitive to justify presenting the proposition to the Federal Power Commission.

Q. Let me put this to you: If the California market is screaming for gas, as I understood you to say yesterday, and all the gas that you can get would be taken up by that market at a price



of 34 cents, nobody would be sending gas on up into the markets of Washington and Oregon unless they were getting a higher price than 34 cents, would they?

A. Well, actually, this 34 cents that is now spoken of is the price structure that was worked out at the time when El Paso was going to buy 250 million of the 300 million that was to be imported and we were to make the exchange with Pacific Northwest at the point near Boise and build a pipeline from that point to San Francisco.



Q. Then, the price was really determined on something that never happened?

A. That is correct.

Q. And it has got about as much relation to the real factual situation as the price of milk in Texas?

A. Yes, but it was against the people that did it rather than in favour.

Q. Mr. Kayser, if that is so why are you now prepared to say 26¢ at the Canadian border for gas?

A. Because conditions have changed very substantially since that time.

Q. And, I think, making it very apparent that a contract without an escalation clause in it is not a very provident one?

A. If you will let me comment on that, I will appreciate it.

Q. Certainly.

A. That contract was the basis of the completing of the line from the Peace River.

Q. I accept that ---

MR. FRAWLEY: I did not hear that answer.

MR. PATTILLO: I accept that. He said it was the basis of the completing of the line from Peace River.

THE WITNESS: Now, the completing of that line and the taking of the gas at the border



at that price, and moving it down to San Francisco, was not an easy thing to do.

MR. PATTILLO: Q. I guess it wasn't; you never did it.

A. That is right. That is exactly correct. It is illustrated perfectly by that. We did, however -- I would like to explain that, and I hope you feel that I am not being fractious or antagonistic.

Q. No, and I hope you do not think I am, either.

A. I hope you have the same thinking about me. We were prevented from thinking that because Pacific Gas & Electric Company had other plans, but that comes under their business. But, in spite of that fact we agreed to take 100 million of 300 million and absorb it into our system by taking it into our system down at Ignacio, and that made it possible for Pacific Northwest to go forward and take the full 300 million, and our subsequent action in acquiring Pacific Northwest has made it possible for the further marketing of gas through that outlet so that today, now -- you said it was a thing that was never done -- we are actually taking 100 million of that 300 million by exchange down at Ignacio down in Colorado, and it is now flowing to the California market through our lower connections.



Q. Physically?

A. Physically -- now, let us understand this. Physically it will not flow, but economically it is flowing.

Q. Yes, because of the way you explained it a few minutes ago?

A. Yes, because we made it possible. By taking that gas we made it possible for the West-coast Transmission line to be built and for the gas to move across the border, and we did it deliberately at all times because we regarded it as essential to the soundness of the service of the whole area, and we still so regard it.

MR. PATTILLO: I think this might be a good point at which to recess, Mr. Chairman.

THE CHAIRMAN: We will have a ten-minute break, gentlemen.

---A short recess.

THE CHAIRMAN: Gentlemen, we will now resume the hearing. Mr. Pattillo?

MR. PATTILLO: Thank you, Mr. Chairman.

Q. Mr. Kayser, if we can still deal for a moment with this 34-cent and 22-cent business, would you please look at your map at the back of your submission?

A. Yes, sir.

Q. I would like to understand two things



clearly. At the present time is there any gas coming from the south for the purpose of serving Washington and Oregon over the lines of Pacific Northwest?

A. Yes, sir.

Q. But there is no gas going south from -- there is no gas going south over those lines?

A. No, sir. The gas at present is flowing north up to a point because there is some 200 million -- between 200 and 250 million -- coming down from Sumas on the border.

Q. Yes?

A. Now, that flow downward at some point meets the flow upward, the exact point I am not at this moment prepared to say.

Q. And you would agree that if it were not for this El Paso arrangement whereby it takes 100 million at the border and then exchanges it with Pacific Northwest your El Paso arrangement would have to be flowing a further 100 million north to service the Washington-Oregon area?

A. I do not quite understand that question.

Q. Let me put it again, and I will try to make it clearer. At the present time at the border, as I understood it this morning, part of the gas purchased is for the account of El Paso and part is for the account of Pacific Northwest. Then,



subsequently, an exchange is made between Pacific Northwest and El Paso so that El Paso delivers or hands over what it bought from Canada to Pacific Northwest, and Pacific Northwest hands over what it has purchased down in around the San Juan basin in an equivalent quantity?

A. Yes, sir.

Q. What I was suggesting to you was if it was not for that exchange there would have to be a further additional amount flowing north through the line of Pacific Northwest?

A. If we physically took the 100 million at the border ---

Q. Yes?

A. --- and carried it on Pacific Northwest would have to flow 100 million from the San Juan basin up their line to take the place of that which we pulled off at that point.

Q. So that that exchange results in a saving of transmission costs for both companies?

A. Yes.

Q. And results in El Paso having another 100 million a day available for the California market?

A. Yes, sir, that is what it does.

Q. And enables that 100 million, I suppose, to be sold to the Edison Electric for burning fuel?



A. No, it is not involved in that.

Q. It is not involved in that?

A. No, sir.

Q. Now, what does this 22-cent price as referred to in the contract December 11th, 1954 at page 9, Article V --

"1. Price Schedule: Subject to the
"adjustments hereinafter provided for, the
"Seller agrees to sell and deliver and the
"Buyer agrees to accept and pay for all
"gas delivered by the Seller to the Buyer
"under the contract demand provisions
"hereof prior to January first, 1959, at
"demand and commodity rates which on a
"90% load factor will result in a price
"of twenty-two and one-quarter (22 1/4¢)
"cents per Mcf and on and after January
"first, 1959, at demand and commodity
"rates which on a 90% load factor will
"result in a price of twenty-two (22¢)
"cents per Mcf. . . ."

Now, what does that 22¢ amount to so far as demand price and commodity price are concerned to give that combination price?

A. I don't know.

Q. You do not know?

A. No, I do not know.

Q. I assume Mr. Hetherington will be



able to work that out?

A. The tariff will speak for itself on that. I do not pretend to carry in my mind the tariff provisions on demand and commodity ---

Q. Do you agree with me on this, Mr. Kayser, that where you have the right to say where you will not take 50 million in any year that it is not really a 90 per cent load factor?

A. Well, are you referring to the right in this contract to delay 50 million of it until a given time -- until 1960, I believe?

Q. No, I am referring -- just one moment while I find exactly what I ---

A. Maybe I can clear it up this way, Mr. Pattillo. The contract provides for a demand and commodity rate, but it is necessary for the company to take or pay for 90 per cent -- a 90 per cent load factor -- under that demand and commodity rate at such a rate as will produce 22¢ as the amount paid for the gas.

Q. Well, this is what I am getting at; it is on page 7 of the contract:

"1. Contract Demand. The Buyer agrees
"to take and purchase from the Seller,
"and Seller agrees to sell and deliver
"to the Buyer Three hundred thousand Mcf
"of natural gas per day at the rate of
"delivery hereinafter specified:



"(a) prior to February First, 1958, providing Buyer's and Seller's facilities required to deliver and receive the gas are completed, 200,000 Mcf per day,
"(b) For one year commencing January First, 1958" --

that is, this present year --

"250,000"

and then under (d):

"Buyer shall have the right upon Sixty (60) days' written notice to decrease the above quantities by 50,000 Mcf per day until January First, 1960, but not thereafter..."

Now, that is what I am getting at right there.

A. Yes, that is what I thought you were talking about. That is correct. That is simply a negotiated part of the contract to relieve the burden on the purchaser of the necessity of taking that gas to that full 300 million in the year 1959 because of the fact that gas was simply being introduced into the territory of Northwest, and there was fear that the market would not be developed fast enough to take that additional quantity of gas.

Q. Does it not amount to what I said, that you ---

A. No, it does not.

Q. --- that you can still have your price without your load factor?



A. No; as to the quantity you took you had to take it at the load factor to get the price.

Q. Yes?

A. But just as for the year 1958 we will only require to take 250 million a day, so by 60 days' notice we could continue that 250 million a day for the year 1959, but not after the year 1959, you see, -- you cut it off at the year 1960 -- but during that year 1958 and during that year 1959 you had to take at a 90 per cent load factor in order to get the 22-cent price.

Q. But you can adjust the figure on which the load factor is calculated; is that right?

A. That is exactly correct. The obligation was only to take 250 million for the year, 1959.

Q. Now, I assume that you are familiar with the contracts that have been made by Westcoast Transmission with the B.C. Electric Company and with the Inland Company?

A. Not in great detail, no.

Q. You are aware that the prices being paid by those companies for gas are substantially more than the price that is being paid by Pacific Northwest?

A. Yes, sir, I am aware that they are more, but the exact amount I am not aware of.

Q. Now, in your experience in the gas



business have you ever seen in producers' contracts entered into with the transmission company since 1952 anything equivalent to the penalty provisions that apply to volumes in the producers' contracts between Westcoast and the producers?

A. I am not familiar with the penalty, Mr. Pattillo.

Q. Well, the price, as I understand it, is a 10-cent base with an escalation going up to a 12 1/2-cent base.

A. That is right; I remember that.

Q. Let us stop there. That, over a 20-year term, is a very small escalation, is it not?

A. Yes, as things go at present where the development has gone as far as it has today. Understand now, that in the early days of marketing gas in the United States we bought gas under contracts -- that is, we did not; the El Paso Company did not, but other companies did, with which we are familiar -- for the life of the lease at one and two cents.

Q. I have not any doubt.

A. Yes. I am merely mentioning that to show that in the development period of any area it is not out of line in the first contracts that get the thing started to be contracts that are much less favourable than those that are later executed.

Q. Let us just get at this, now. Since



January first, 1954, do you know of any producers' contracts anywhere except these up in the Peace River district where an escalation clause is limited to 2 1/2¢ over a 20-year period?

A. I cannot say that I do know of any in the United States exactly on that basis.

Q. No. What is the normal escalation that is in the present-day contracts in the United States?

A. We have generally provided for a 1¢ increase each 5 years.

Q. Yes?

A. We have not, to my knowledge, provided for a greater increase than that.



Q. Now, under the present producers' contracts up there, you are aware that until the volume reaches a certain figure for the line, the prices paid to the producer are reduced from this 10-cent basis and can be as low as 6 cents?

A. That is right, I am familiar with that.

Q. Have you ever seen such a thing as that in any recent contracts with producers in the States?

A. Can I make an explanation of that?

Q. Yes.

A. That was a reasonable provision to make possible the building of this pipeline because you cannot get \$200 million together unless you can show the economics that will support it. Now, in the beginning of the plans of this pipeline, it was not in the cause; the market had to be developed for them to start out without their full capacity in use. This was a reasonable, to my notion, provision for the producer in order to have a market at all to help carry the project during its initial stages.

Now I am not saying that capriciously because, actually, the subsidiary of the Gulf States, I mean of the Western Natural Gas Company, analysed that contract and did not like it any better than you do, but we signed it because we



thought that provision was not unreasonable and represented a contribution toward the making possible of a market for the gas and we expect to find substantial amounts more and hope to get an advantage out of it in the future.

Q. What you are saying, Mr. Kayser, is this: if you are going to start one of these projects, such as Westcoast Transmission, everybody concerned must contribute to it; the producer, the transmission people and the buyer?

A. That is what I think.

Q. The only thing is, I see that the producer has contributed, apparently the Transmission has contributed but I cannot find the contribution of the buyer.

A. I can explain that to you. The gas that we run in from Canada and deliver to California Gas, the El Paso Company, at the time we made those contracts spends more for the gas that we would get from Texas and we would deliver to the California Oil.

Q. If this gas is so expensive, will you tell us why your company, El Paso, in their brief is interested in acquiring in 1957 this Pacific Northwest system?

A. Only on a long-range view. With regard to the potential reserves, Canada has the great remaining, practically virgin area, for the



production of gas and we can consider that the service to the whole coastal area and, in fact, the western part of the United States properly should be connected to that potential so as to be able to get the advantage of buying whatever surplus amount Canada is willing to export whether you have to pay more for it, initially, or not.

Q. Now, if that is your thinking, then looking at it on a long-term, do you not think it would be fair, having regard to what is going to develop, in your mind, in Canada and the potentials of your market, do you not think it would be fair that you have an escalation clause in your purchase contract right now?

A. Well, I did not negotiate that contract.

Q. I appreciate that.

A. And I think it would be a mistake for me who has to pass on every cost that I incur to the consumers of the various states that we serve, I think it would be inappropriate for me to sit here and say I should revise that contract.

Q. Do you not agree, over the term of this contract, if you do not have any escalation clause in it, and you have not, the company has, to put it mildly, a most favourable contract?

A. There are more ways to choke a cat to death than with hot butter and, over the



years, I am sure that there will be other ways to compensate the situation so that everyone will make a fair return. You will notice in the application to the Conservation Commission of Alberta, we supplemented our contract with a simple direct statement that we would be willing to pay, at the border, $7\frac{1}{2}$ per cent return upon the transportation cost from the point of production. I do not believe there is any complaint about the price we have offered to pay -- I mean, that we have offered to pay to the producers in this last transaction.

Q. Of course, we will come to that later. I am talking about the old one.

A. I am talking about the new one.

Q. We want to talk about the same thing.

A. But you are asking me my attitude and that is the best explanation I can give you.

Q. Let me put this to you: from your experience in transmission work, what do you say is the cost per hundred miles of transmitting gas in a 30-inch pipeline?

A. Well, if you are on your toes and do not have hard luck, have good organization, I think the present cost would run about $1\frac{1}{2}$ cents per hundred miles, in the United States.

Q. Do you know what they are in Canada?

A. No, sir; I am not familiar with the cost in Canada.



Q. You have never inquired into what it costs Westcoast Transmission to transport this gas?

A. Yes, I have looked at their figures and as far as I can tell from looking at them, I consider them to be proper.

Q. In the vicinity of 2 cents?

A. I do not remember the cost in that fashion. I want to make this clear to you now, you cannot transmit that gas 100 miles for $1\frac{1}{2}$ cents; in a long transmission like 500 miles or 1000 miles, you will get an average for that operation of around $1\frac{1}{2}$ cents; I am talking about the United States. But if you have to transmit it 100 miles only, it will cost you more than that. You do not get into a real low cost unless you get into three to four or five hundred miles.

Q. I put this to you: has it ever occurred to you, Mr. Kayser, that when the price to the purchaser gets to 10 cents they transmit this gas 650 miles to the border and only get 22 cents so that part of the operation is not going to be a profitable one?

A. Well, as I understand it, it would be, but I am not going to pass on that question without a thorough analysis of the figures. I am incapable of doing so.

Q. And you have not made that analysis?



A. No, sir, I have not.

Q. What interest have you, personally, in Westcoast Transmission?

A. None. I was not smart enough to buy.

Q. I was just going to try and find out if you have any of that nickel stock. Looking at the proposed new contract, approved May 25, 1957, page 6, Article V, price ---

A. Yes, here it is.

Q. Am I correct in thinking these prices which commence at 25 cents per Mcf and escalate up to 27.4 cents for the seventh year and, thereafter, commencing in the eighth year and including the twentieth year shall increase progressively at the rate of 2/10ths of a cent per year. Do those merely suggested prices on present estimates do what you are talking about; that is, giving the Transmission Company a $7\frac{1}{2}$ per cent return?

A. That is not quite correct because, actually, the first figures we saw on the $7\frac{1}{2}$ per cent return exceeded that 25 cents. At the time these figures were fixed, I think it was the conception that this is what these prices would do. Then, later, on a further study came to the conclusion that, probably, they would not and that the only fair thing to do was to not



to try a fixed price, but to bind it by a return, and it seemed to be that $7\frac{1}{2}$ per cent return was the one that was generally regarded as the return that we would want to make in Canada although we operate on a $6\frac{1}{2}$ per cent return, and try to get that, in the United States. We agreed to the $7\frac{1}{2}$ per cent return.

Q. Are you at all familiar, Mr. Kayser, with the prices that Westcoast were seeking to get from Westcoast Transmission Inc. at the border when that was the original concept?

A. No, sir -- that is, when they first applied to serve the Pacific Northwest area?

Q. Yes.

A. No, I do not know a thing in the world about it.

Q. But you were in on the negotiations as to the price of 22 cents?

A. No, sir, I was not.

Q. You were not in on that at all?

A. I was not in on those negotiations, We had no interest in neither Pacific Northwest nor Westcoast at the time that contract was made.



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Q. May I put this to you, then:

would you agree that this 22¢ contract is a contract that you would expect to be insisted upon by a person who had acquired control of the market and would only deal on his terms?

A. Not at all.

Q. You would not agree with that?

A. No.

Q. When Mr. Fish subsequently sold El Paso, he made a very handsome profit, didn't he?

A. I think it was a profitable transaction to all of the stockholders of Pacific Northwest, yes.

Q. And the big thing they had to sell was the Canadian contract, wasn't it?

A. No, sir.

Q. You don't consider that was a factor in the sale?

A. The Canadian connection was a big factor. The Canadian contract, per se, was not a determining factor at all.

Q. And the result of the sale results in companies which you control having almost a Maginot Line from the Canadian border down to Texas bordering the States of Washington, Oregon, California, Nevada, Utah and Arizona?

A. The answer is "no". I heard one word you put in there.



Q. Well, I won't call it that, but it really ---

A. It has nothing to do with offence; it has nothing to do with defence. It has only to do with the fact that, as I testified this morning and yesterday, we regard the connection to the Canadian potential reserves as of highest importance to the service of our market. We, therefore, regarded it as of the highest importance to the El Paso Natural Gas Company, and we purchased or traded for the Pacific Northwest Pipeline because it gave us access to those markets plus the fact it gave us access to the Rocky Mountain region which is likewise the last, more or less, big region of the western portion of the United States from the standpoint of reserves.

Q. And if this new proposal goes through, there won't have to be a very great extension northward into Alberta to practically have a circle extending from the Westcoast Transmission line on the west over into the properties of Westcoast Alberta down to the Savanna Creek development and into Kingsgate, so you would have a complete circle drawn around a specific area of Alberta where it is estimated there are large quantities of gas?

A. Well, I would like to say this, that we think that the connection to the Peace River is important. We regard the connection, through



Kingsgate, into the Alberta potential as likewise very important. We think that such connection has got certain advantages to both parties -- I am talking about now: to the Canadian situation from the standpoint of export, and from the standpoint of our situation from the standpoint of import. The advantages I see, so far as we are concerned, are that by having the two connections into that Pacific Northwest area you have much better assurance that a failure of pipeline at one point will not cause an interruption of service, because you simply pick up the slack from the other entrance, and that is worth a great deal to us. We regard that as a very important fact. Also, it gives us this position and opportunity, that we will be able to take the gas from whichever area has a surplus that is desired to be exported. From the standpoint of Canada, there isn't any question but that it gives an opportunity for a more continuous and certain export of the quantities involved, because a failure or diminution of quantities that would be required from one source could be made up from the other source, and that is our attitude about what we have done. We want to have access to whatever quantities you are willing for us to have through export, and we have the market; we are attached to the market, to use that sentence.

Q. Well now, if these markets that you



are presently serving -- as I understand it, ten years ago California was not taking any more gas per day than you are now proposing come across the international border at Sumas within a year or so; is that correct?

A. That is about right.

Q. And in the last ten years the amount that it has required has increased eight times -- 800 per cent?

A. Or better.

Q. And if that market keeps on increasing at that rate, and if the Washington and Oregon markets develop at the same rate, there are going to be terrific quantities of new supplies required, aren't there?

A. Yes, sir.

Q. And it would seem to me that, logically, this ring that I am talking about would be the economical development that you just push up through Alberta until you have tied in with the Peace River - Alberta sections of the thing, and then you have a ring around the rosy?

A. No, it does not work that way. The whole purpose is to move the gas in one direction. Obviously, so far as export is concerned, it is to move to the border. I cannot think of any reason why this proposed outlet through Alberta would be run up into the Peace River area. I cannot think



of it now -- any economic reason for it. The gas would flow -- should flow in whatever channel is the most economic. Now, there are a lot of factors that deal with that: distance is the principal one, so I would say that the question of having a ring does not mean anything to me; it just does not mean anything.

Q. But in the next 20 years, assuming this rate of demand continues, the results would be, of your two proposed schemes, that the producers in the southern area of Alberta hooked up with your system would be doing substantially better than the producers in the Peace River area hooked up with your system, although one might not be supplying any more than the other as to the proportions of the whole?

A. You want my judgment on that?

Q. Yes.

A. I think they would be just about the same long before then.

Q. You think there will be some re-negotiation of the whole picture?

A. I think that quantities taken at prices subsequently paid would probably even them.

Q. That is just what I am coming to. As you have not recognized the policy that I enunciated at the beginning, that a gas that is exported should be surplus, and that it should only be exported



at provident prices, do you think as an individual with your knowledge, that this Commission should fairly report to the Government of Canada that the present contract negotiated in 1954 with Pacific Northwest is a provident contract?

A. Yes, I do.

Q. You do?

A. Yes, sir, I certainly do, for this -- let me explain: I do not think it is essentially fair to appraise the contract on any basis except that which existed at the time it was executed by the parties.

Q. Well, I couldn't tell you, Mr. Kayser, I take it that way. The way I take it is that at that time Mr. Fish had got hold of a franchise from the F.P.C., and he said, "Very well, deal on my terms or we don't deal at all."

A. Well, I disagree with you, so that is the most I can say.

Q. You don't think he drove a hard bargain?

A. I wouldn't want to say that under all the circumstances.

Q. Let us go back again: looking at the contract today, as the Commission must do, would you expect the Commission to say in the light of the present situation that this contract with Pacific Northwest is a provident contract to the people of



Canada?

A. I still say that I think it is, and that it can be and should be so considered.

Q. In the light of the prices that you are presently prepared to pay the producers in Southern Alberta for gas, you agree that over the life of the contract they are going to suffer as compared to prices prevailing elsewhere because of the lack of escalation clause and volume penalty provisions?

A. The one in Southern Alberta?

Q. I say, having regard to the prices now being offered in Southern Alberta, that the lack of escalation beyond 2 1/2¢ and the volume penalties for the life of the contract, the producers who are supplying are going to suffer?

A. In Southern Alberta?

Q. No, in Peace River.

A. Well, you said Southern Alberta.

Q. I said, comparing ---

A. You mean the producers in Peace River will suffer by reason of the present contracts that Westcoast has?

Q. Yes.

A. I say, no.

Q. You say "no"?

A. And the reason for it is that by reason of executing these contracts they do have



a splendid pipeline, a 30-inch pipeline, capable of carrying out not just the 350 or 400 they are taking out, but 650; and that has made it possible for the development of the area and the marketing of the gas, and I think that is the basis upon which it was executed, and that is the basis upon which the producers entered into the contract, and I think it is a fair basis.

Q. That won't do them much good unless they can get higher prices, will it?

A. That is right.

Q. And you know, yourself, of your own knowledge, that many of the people -- many of the producers that were proposing to go into the original scheme have refused to go into this one and are not in as yet?

A. No, I don't know -- well, I would have to examine it to know that; but, let us assume it to be true.

Q. But as long as that favoured nation clause can be avoided by buying up gas in the ground by people who have a financial interest in the transmission line, the prices may never go up?

A. Well, I don't think that is practical, and I will speak for my own company and not anybody else. We haven't got any notion of buying up on such a basis as that. You have to pay, really, United States money and Canadian money for



gas in the ground, and that is one of the most burdensome things you can do.

Q. It is not as burdensome, perhaps, as paying high prices for gas because of the favoured nation clause that would effect any contracts in existence?

A. You would be surprised, but it is important, because you have to stand still with that money and earn 6 1/2 in the case of the American, and 7 1/2 in the case of the Canadian, and if you have to stand still very long with that money in the ground, you really do have to get a high price for the gas in order to come out even, let alone make any money. You are talking about something that is not practical, and, as far as I am concerned, we are not in the remotest fashion interested in trying to accomplish that result either in that manner or in any other manner.

MR. PATTILLO: Mr. Chairman, if we could take a recess now and perhaps start a little earlier this afternoon, that would be very convenient for me. I would like to go over my notes, and I don't think I have very many more questions to Mr. Kayser.

THE CHAIRMAN: Very well, we will adjourn now until 1.45.

---Whereupon the hearing adjourned at 12.00 noon until 1.45 P.M.



---Upon resuming at 1.45 p.m.

THE CHAIRMAN: Gentlemen, the Commission will now resume its hearings. Mr. Pattillo, are you ready?

MR. PATTILLO: Thank you.

Q. Mr. Kayser, directing your attention, for the moment, to what I call the new deal, that is the Kingsgate proposition and your agreement of December 9, 1957, which is found under Tab 15 of the Westcoast exhibits, did that amendment, which provided that notwithstanding the price revisions to which I referred this morning in the agreement of May 25, 1957, and the proposed definitive agreement, the amount of money to be paid each month for gas delivered and purchased shall not be less than the full cost of service incurred by Westcoast in purchasing and transmitting the gas to Kingsgate, including an annual rate of return of $7\frac{1}{2}$ per cent on the net investment in the facilities required for such delivery of gas from time to time, such cost of service to be determined substantially in accordance with the rules and regulations of the Federal Power Commission -- did that amendment have anything to do with the appointment of this Commission or the entry of Alberta and Southern into the Province of Alberta?

A. Not that I know of.



Q. What was the reason for it?

A. Well, what I said this morning, it seemed to us to take out of the question -- take out of the transaction any attempt to fix a price that we would try to make $7\frac{1}{2}$ per cent return for the West-coast; if you try to go into all of those details we thought it would be better to say that we would pay, based upon that figure.

Q. And do you agree that that is, in your opinion, a fair proposition for the export of gas in Canada to the United States?

A. Yes, sir.

Q. Then do you agree that the price of 22 cents in the old one cannot possibly yield that result?

A. I didn't say that and I don't say it now.

Q. Well, you have seen many forecasts prepared for investors as to the rate of return on the Westcoast Transmission facilities?

A. No, I haven't.

Q. You have not?

A. Oh, no.

Q. Have you ever done any studies, had any studies made or examined any studies to see what the rate of return is to Westcoast Transmission on your 22-cent contract?

A. No, sir, I have not.



Q. You have no idea what the return is?

A. Not with accuracy enough to testify what the return is.

Q. And what percent of interest does your company or you or any person associated with you have in Westcoast Transmission?

A. What per cent of interest?

Q. Yes.

A. The total percentage I have now is in the range of 23.

Q. And as a 23 per cent shareholder, you cannot tell us what the rate of return is on that 22-cent contract?

A. I sure can't.

Q. You must have more than gas coming out of your ears.

A. What's that?

Q. May I ask you this question, Mr. Kayser, and this is entirely a hypothetical question: If this Commission saw fit to recommend to the Dominion of Canada that there should be no export of gas permitted on terms less favourable than those contained in your letter of December 9, 1957, would you be prepared to re-negotiate the 22-cent contract to bring it into line with such recommendation?

A. Well, I will tell you: I will say, as far as I am personally concerned, I want to do



everything that is possible to keep the relationship between our market and your source of supply smooth and satisfactory to both parties. Now, I am not, as I said this morning -- I have no business standing here being an intermediate party, for whatever is charged to me I have to pass on; and when I say "I" I mean the company. When it starts absorbing, it is a question of time until it goes out of business and it cannot do you any good or it cannot do the consumers any good.

So any question of re-negotiation of that contract I would be unwilling to enter into without having previously gone into the matter thoroughly with those who are going to burn the gas and pay for it; that is the direct representative of them, which would be the distributing companies, principally in California but not entirely, because it affects, in part, the rest of our -- well, I think it does affect the rest of the consumers; I am not sure about that, and I would not want to say that, but it certainly affects the consumers in California and the consumers in the Pacific northwest. Now, I would not say I would not take it up with them and endeavour to arrive at something that is reasonable because my personal attitude is that I certainly want to keep the relationship, and I think it is highly important from every standpoint that it be kept in a smooth, satisfactory condition.



Q. When you wrote this letter of December 9, 1957, relating to the new deal, had you previously discussed that with the distributors?

A. Yes, sir.

Q. And they thought that was fair?

A. They thought that was fair.

Q. And I assume, therefore, that they thought it was fair for future supplies and they might consider it was fair for present supplies?

A. I am not committing them about that, because I didn't talk to them about it.

Q. Will you tell me how the consumers in California could be at all concerned about the present supplies, which do not get that far south?

A. Which do not get what?

Q. That far south. The present supplies, you told us this morning, went physically to Washington and Oregon, the present Canadian supplies through Sumas. Now, how would the consumers in California be at all concerned about that?

A. Well, I think I told you, likewise, this morning, that economically 100 million feet of that gas is paid for and goes to the California consumers, economically. The balance of it is paid by consumers in the balance of the Pacific northwest territory.

Q. The other question I would like to ask you is this: you appreciate that we have recently



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had a pipeline partially come into operation that will eventually be servicing the Canadian markets as far east of the Province of Quebec?

A. Trans-Canada, you are referring to?

Q. Yes. What would you expect as to the increase in demand amongst consumers taking off from that pipeline? Would you think it would follow the increase that has occurred in California?

A. I do not think it will be as spectacular as the increase in California, for the reason that I believe the entire western portion of this continent, including the United States and Canada, and it is true in Mexico, likewise, that entire portion of the continent is having a spectacular increase in population and industry.

However, the eastern portion of Canada, so I understand, has had a tremendous development over the past ten years.

I would expect it to have a very substantial development over the next ten years and I would expect that the demand for gas in Eastern Canada would be greater, that is, the demand would increase more rapidly than simply what would be indicated by the increase in population and industry, for the reason that with the construction and placing into full operation of Trans-Canada you would have, in effect, the first introduction of Canadian gas in big supply into Eastern Canada,



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and I believe it would have a stimulating effect upon the demand for gas. It has, in my experience, wherever it has been introduced.

Now, that, of course, is dependent upon cost, because you know that you can price yourselves out of any market.



Q. That is not quite the same answer that you gave before the Conservation Board, is it, Mr. Kayser?

A. I think it is. If it is not and you will point it out, I will be glad to correct one or the other.

Q. I understood you said to the Conservation Board that you anticipated that the increase in demand in Eastern Canada would follow the same degree of increase as happened in California?

A. I think, if you will examine the record, you will find I said I thought that the increased demands of Alberta and Western Canada would follow very much the increased demands of the western portion of the United States because I think the whole western portion of the continent, as in the immediate past, can look forward in the future to a greater growth of population than the average in the rest of the country. I know that is true of the United States. I do not have to ask anybody about that.

Q. Mr. Kayser, I have in my hand a prospectus of the El Paso Natural Gas Company and attached to it is a letter of yours to the holders of the common stock dated August 9, 1957, and the date of the prospectus is August 28, 1957. I am going to make some references to it. The first is at page 15. It begins: "Pacific Northwest



has an agreement to purchase Canadian natural gas at the international boundary near Sumas, Washington, from Westcoast Transmission at the rate of 200 million cubic feet per day commencing on November 1st, 1957, if the facilities of both are ready; at the rate of 250 Mcf after January 1st, 1958, and at the rate of 300 Mcf per day after January 1st, 1959. The agreement provides that the price, on a 90 per cent load factor, is to be 22½ cents per Mcf until January 1, 1959, and 22 cents per Mcf thereafter for the remainder of the 20-year term. Subject to necessary governmental authorization being obtained, Pacific Northwest has agreed to purchase from Westcoast Transmission a further 100 Mcf per day beginning November 1st, 1959, on the same terms and conditions."

When was that agreement made for that additional amount of gas?

A. I think that is all in one agreement, Mr. Pattillo.

Q. I beg your pardon?

A. I think it is all in one agreement.

Q. When was the option to acquire that additional gas exercised?

A. I do not think it has been exercised -- no, I do not think so. We have not any plan about it at the moment.



Q. What does this mean: "Subject to necessary governmental authorization being obtained, Pacific Northwest has agreed to purchase from Westcoast Transmission a further 100 Mcf per day." You would not use that language if you only had an option, would you?

A. No, you would not but it is subject to necessary authorizations both by the Canadian Government, the United States Government and/or the Federal Power Commission on the Certificate of Convenience and Necessity.

Q. Would you be prepared to agree with me that the additional amount of gas should not be exported to you on the terms and conditions of a flat 22 cents but should be on some such similar basis as outlined in your letter of December 9, 1957?

A. As I said before, I do not feel competent on this stand here today to change any provision of that contract.

Q. I appreciate you do not, but you can tell me whether you, as an individual, would be prepared to recommend things to your board?

A. I cannot do that either and I would not be willing to do it until I had talked to the people who are going to pay for it and burn it.

Q. I am still reading from the



prospectus, page 15:

"The gas purchase contracts of
"the company and its subsidiaries, in-
"cluding Pacific Northwest, provide for
"increases in price at stated intervals."

That may be a correct statement excepting for
Westcoast Transmission but it is not a correct
statement when you take Westcoast Transmission into
consideration, is it?

A. I think that is probably true, what
you said.

Q. But all other contracts that you
have or Pacific Northwest have, all provide for
increases in prices at stated intervals? Is that
correct?

A. I think it is.

Q. I am reading at the bottom of
page 15:

"In addition, the purchase con-
"tracts with one producer, under which
"the Company obtained approximately
"19 per cent of its total gas supply
"during 1956, contain provisions for
"increases in the price of gas, under
"certain conditions, in the event of
"increases in the level of prices re-
"ceived by the Company from its custo-
"mers. This producer on September 11,



"1956, filed for a rate increase which
"would increase the Company's cost of
"purchased gas from this producer by
"approximately \$1,800,000 annually.

"This application was based on the
"Company's having allegedly received a
"rate increase in the Company's rate
"filing now pending before the FPC and
"the application alleged further that
"this producer was earning less than
"a fair return on the gas being sold
"to the Company. These increased
"rates were placed in effect on March 11,
"1957, and have been collected by the
"producer since that time subject to
"possible refund of such portion, if
"any, of the increased rates as might
"ultimately be found not justified."

Is it a fact that Pacific Northwest and El Paso have
increased their rates to the consumer since this
Sumas contract was made in 1954?

A. Yes, El Paso has filed a rate
application that went into effect January 1, 1958,
and I believe Pacific Northwest filed one that went
into effect February 5, 1958.

Q. And the consumers are paying 2
cents per 1000 cubic feet more?

A. It depends on which ones you are



talking about; that is within the range of both of them.

Q. That is within the range of both of them and if Westcoast Transmission had a contract that was anything like this very successful negotiator who supplied 19 per cent in 1956, that would have made a very substantial difference to the amount of money they would have received under the contract?

A. Whatever the percentage difference would be. I do not know that it was a very large percentage increase on the part of this producer that you are reading in respect to. The increase that we applied for was not based on that contract but was based upon the increases that were a fixed amount, as I testified this morning, one cent every five years and a bunch of those came due on January 1st, 1958, and were the basis, in part, of the application for a rate increase plus inflation of other costs that had occurred since our previous application for the rate increase.

Q. Can you tell us, from memory, approximately when this contract this producer has which accelerates when prices are increased to the consumer, can you give us any idea as to the date that contract was negotiated?

A. Yes, the first time that appeared in that contract was about September, 1945 -- I



believe, October 1st.

Q. About nine years before Westcoast made this provident deal with Mr. Fish?

A. Whatever the calendar says.

Q. Now, you spoke this morning about the contract with the Pacific Northwest making it possible to build this pipeline and I told you that I agreed with that. Do you not think that it would have been easier than it was to raise the necessary funds if this contract had had an escalation clause in it?

A. Well, I do not know whether I would say that it would make it any easier or not. It might have.

Q. I would imagine, Mr. Kayser, from your almost thirty years' experience at the head of a very large gas company and the financing you must have had to arrange in that period of time, that you could give me a little clearer answer than you just gave me, that "it might have"?

A. Not having participated in the actual financing, I cannot say it would have made any difference. I would say, obviously, it would be a more favourable contract to Westcoast if it had an escalation clause.

Q. Thank you. Mr. Kayser, have you or your companies or anybody on your behalf or any member of your family any share interest in this



Jefferson Lake Sulphur Company?

A. No, sir, none at all.

Q. Do you remember, this morning, I was asking you about this boiler fuel for the California Edison?

A. Yes, sir.

Q. I want to read you from page 12 of this same prospectus:

"In addition, the Company has
"entered into an agreement with Southern
"California Edison for the sale and de-
"livery of natural gas for boiler fuel
"in the amount of 100 million cubic
"feet per day in 1959, with increases
"thereafter, subject to conditions
"specified in the agreement including
"the condition that necessary gas supplies
"shall be available to the Company,
"to 300 million cubic feet per day."

Now, is it just a coincidence that that amount and that time coincides with this extra 100 million that Pacific Northwest is going to get from West-coast Transmission?

A. It had nothing to do with it, Mr. Pattillo.

Q. I am just asking, is it a coincidence that the amount and the time coincides?

A. I did not even know they tied in



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and did not even know there was any coincidence about it. I am just telling you the contract with California Edison was not tied in nor taken into consideration when we made the contracts in respect to Canadian gas. As a matter of fact, we had no negotiation with them at the time we made this contract and bought the Canadian gas.



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Q. Let me put this to you: Would you be able to make 100 million cubic feet per day available to the Southern California Edison Company for boiler fuel if you could not get that extra 100 million from Canada?

A. Yes.

Q. You could?

A. That is right. That is exactly the way it is.

Q. Notwithstanding the fact that you say the California market is larger today and cannot be met today with the present production?

A. I did not say that; I said the future market. I made that clear in my testimony that we have now the gas for all our present certificates. This is the market that we are asking for the additional gas in Canada, but in fairness I would like to say this, Mr. Pattillo, that when gas comes into the system it is like money in the bank. You do not have to care about identifying where this dollar went. It is all available to help you supply your demands. I think that is a fair statement.

Q. There is just one last question, Mr. Kayser: Have you or have any of your companies, or has any person in your family, directly any share interest in Phillips Petroleum?

A. No, we do not. I am sure of that in regard to the whole family, and the company has



absolutely none.

MR. PATTILLO: Thank you, Mr. Kayser.

THE CHAIRMAN: Mr. Frawley may have some questions, Mr. Kayser. As I think you know, he acts for the Province of Alberta.

THE WITNESS: Yes, sir.

BY MR. FRAWLEY:

Q. Thank you, Mr. Chairman. I have some questions chiefly for Mr. Hetherington, but I do have some for Mr. Kayser.

A. Yes, sir.

Q. Mr. Kayser, as the Chairman has indicated, I am representing in these proceedings the people of the Province of Alberta ---

A. Yes, sir.

Q. --- and I have a few questions to ask you. At the time of the negotiations which resulted in the contract between Westcoast and Pacific Northwest I think you told us this morning that the moving spirit in Pacific Northwest was one, Ray Fish?

A. The original contract between Pacific Northwest and Westcoast ---

Q. Yes?

A. --- was handled by Mr. Fish, that is right.



Q. And on the other side representing Westcoast was Mr. Frank McMahon?

A. That is my understanding of it.

Q. You told Mr. Pattillo this morning that you thought it was not a particularly hard contract.

A. No, I didn't say that.

Q. What did you say about it?

A. I said that I thought it was under the circumstances the foundation of the pipeline, and, therefore, the beginning of the market, and from that standpoint it was good for the producers.

Q. Yes. Now, I am going to direct myself to the price of 22 1/4¢, later becoming 22¢. That is what the agreement was. Let us just look at the situation in which those two gentlemen found themselves. Mr. McMahon at that time had obtained from the Alberta Conservation Board a permit to export a sizable amount of gas from the Peace River country. That is true, is it not?

A. Well, those dates are not fixed in my mind, but if you say that is what the record shows, well, that is fine.

Q. I will give you the dates of the negotiations between Mr. Fish and Mr. McMahon that resulted in this contract. I am told that they lasted roughly from July to December, 1954.

A. All right.



Q. Now, I put it to you that before that time Mr. McMahon had been before the Federal Power Commission seeking an import permit from the Federal Power Commission?

A. Well, I do not know about that. Now, you are talking about something I do not know anything about.

Q. You did not know that Westcoast Transmission had been before the Federal Power Commission seeking the same kind of export permit to get into the Pacific northwest as Mr. Fish's company was?

A. Well, Mr. McMahon -- no, I was not familiar with that. I had nothing to do with that.

Q. You did not know that they were rivals before the Federal Power Commission for an export permit to supply gas to the Pacific northwest area?

A. I knew they were rivals for an export permit.

Q. You knew that?

A. Yes, sir, for this specific northwest market; yes.

Q. Yes, you knew that.

A. But I only learned it after the fact. I did not know about it at the time it was going on because I was not in that transaction.

Q. But as you cast your mind back on it, as I am now doing, you will remember that situation; that they were before the Federal Power Commission,



and that Mr. McMahon's application was dismissed and Mr. Fish's application was granted?

A. Well, Mr. Fish's application was granted, and I assume it was tantamount to refusing the application in which Mr. McMahon was interested.

Q. I do not think there was any secret about it. I can put it to you that Mr. McMahon's application was dismissed?

A. All right.

Q. So we have those two men now negotiating for Mr. McMahon to sell some gas to Mr. Fish? That is what it amounts to?

A. Yes, sir, that is what it amounted to at the time those negotiations were carried out; that is correct.

Q. And Mr. McMahon had a permit to export gas from the Conservation Board of Alberta?

A. That I do not know.

Q. And he did not need one from the Government of the Province of British Columbia to export gas that he might own in British Columbia?

A. I did not know that.

Q. You did not know that?

A. No.

Q. Assume now with me, Mr. Kayser, that those were the two basic facts with regard to the export of gas by Mr. McMahon and his holdings?

A. Yes, sir, I understand that thoroughly.



Q. And he wanted to transport it through the United States by pipeline -- let us assume that.

A. That who wanted to transport it through the United States?

Q. To the United States border, at least, by a pipeline.

A. Yes.

Q. Mr. McMahon.

A. Yes.

Q. There is no other way to get it to the border?

A. That is right.

Q. So we have those two men now entering the conference room to strike a bargain as to how much Mr. McMahon would sell the gas to Mr. Fish for at the border?

A. That is right.

Q. Mr. McMahon, who had been the vanquished before the Federal Power Commission, and Mr. Fish, who had been the victor before the Federal Power Commission -- that is not over-dramatizing it, Mr. Kayser?

A. No, that is all right with me.

Q. And that certainly was what Mr. Fish said -- "That's all right with me." -- too?

A. Well, I was not there.

Q. Now, in the Westcoast's brief on this point -- I would like to read you these two lines



from page 47 of Westcoast's brief:

"Immediately following the authorization
"of Westcoast to export gas from Canada
"in June 1952, Pacific Northwest com-
"pleted its plan to purchase gas supplies
"in the Four Corners area of New Mexico,
"Colorado, Utah and Wyoming and made
"application to the Federal Power Commis-
"sion" --

listen to this --

". . . for authority to build a pipeline
"from the San Juan Basin to Seattle and
"serve the market which Westcoast planned
"to serve through its subsidiary, West-
"coast Transmission Company, Inc."

So that was an important fact that was present when
Mr. McMahon was sitting down to negotiate this border
price with Mr. Fish. Mr. Fish was endeavouring to
go into the same market that Mr. McMahon had intended
to go into if he had got an export permit from the
Federal Power Commission?

A. Well, at the time they sat down Mr.
Fish already had the certificate from the Federal
Power Commission and Mr. McMahon did not.

Q. That is right. He had it to supply
the very area that Mr. McMahon had originally in-
tended to supply himself?

A. Correct.



Q. And it was Mr. McMahon's original plan to supply that market not through an intermediary, as it is at present, but direct to distributors. I put it to you that Mr. McMahon's original proposition was to export gas into the Pacific northwest area and to supply it directly to distributors in that area?

A. That I do not know because I was not a part of that.

Q. No; I asked you to assume that.

A. Well, I am assuming it.

Q. Those are my instructions from the Alberta Conservation Board to whom he went to obtain a permit to export.

A. Yes.

Q. Do you know anything about the price that Mr. McMahon put to the Conservation Board that he was expecting to get?

A. No, sir.

MR. FRAWLEY: Perhaps Mr. McDonald or Mr. Hetherington can tell us something about that.

MR. McDONALD: We would be very delighted, Mr. Frawley.

MR. FRAWLEY: Q. Now, the result of the negotiations between Mr. McMahon and Mr. Fish was the 22¢?

A. That is right.

Q. That was arrived at by using San



Francisco as the basing point for the economics?

A. I was not there, now, and whatever the gentlemen who were there say was the basis -- well, fine, that is it.

Q. I thought you told that to Mr. Pattillo this morning?

A. I did not say that I was there.

Q. No, but that San Francisco -- you ascribed it to the way it was set out in this brief, that it was San Francisco, 34¢, less the cost of getting it there.

A. Well, that was the calculation that was used by Mr. Hetherington as the basis for it, and what I said, I thought, this morning -- and what I am willing to correct if I said otherwise, and I say it now -- is that the market at San Francisco and, as a matter of fact, Los Angeles as well, was the determining factor in the price negotiations for Canadian gas.

Q. That is right, and the market at San Francisco of San Juan basin gas?

A. Well, it would be Texas gas as well as San Juan basin gas.

Q. Well, at any rate, San Juan basin gas, and that was the same kind of gas that Mr. Fish was going to bring up to the Puget Sound area?

A. From the same source -- correct.

Q. Now, I ask you why the Puget Sound



or, the economics of the Puget Sound area, was not used rather than the economics of the San Francisco area?

A. Because the San Francisco-Los Angeles area is the big market that could absorb large enough quantities definitely and firmly to justify the completing of the pipeline from Peace River.

Q. If Mr. McMahon had been in a strong enough bargaining position he would have insisted on the Puget Sound area being the location for the basing economics, would he not?

A. I cannot say that definitely.

MR. CHAMBERS: I would like to say that this witness is under oath, and I think the questions should be put basically on questions of fact. When you ask him to swear to hearsay evidence when he says he knows nothing about it I submit ---

MR. FRAWLEY: Mr. Chairman, I quite appreciate my friend's objection, but Mr. Kayser was brought here -- he has been here all morning trying to justify the 12¢, and I would think he could undergo some leading questioning.

THE CHAIRMAN: Mr. Chambers and Mr. Frawley, I think that we do not want to get into the situation where we are conducting the hearings before the Commission as a judicial body, although we are a semi-judicial body, and I think a certain amount of latitude is always allowed before the Commission as



long as we stay away from hearsay evidence, and to the extent that we can I would like to do that, but we are really trying to find out facts, and if we have a witness before us who can testify as to those facts then let us get them.

MR. CHAMBERS: It is the hearsay evidence that ---

THE CHAIRMAN: I appreciate Mr. Chambers' position that a man under oath does not want to express too much of an opinion because -- well, it is different testifying as to an opinion under oath from testifying as to a fact, and we will try to stick to facts.

MR. FRAWLEY: Yes, Mr. Chairman.

Q. Now, Mr. Kayser, whether that was a good price for Mr. McMahon or a good price for Mr. Fish nevertheless that was the price that Mr. McMahon came away with when he went on to develop his project to bring gas from the Peace River country and take it to the American border?

A. That is right, that is the price stated in the contract.

Q. All right, and that 22¢, whether good or bad, that price set the limits of the whole project back from the American line to the well?

A. I do not understand the question. Set the limit -- what do you mean?

Q. Set the limits within which gas purchase



contracts could be offered to the producer?

A. Oh, yes, your purchase contract to the producer had to be based upon that contract.

Q. Yes, and it is fair, then, to accuse the 22¢, if you will allow me to use that expression, for the fact that there is no escalation in the gas producers' contracts in the Peace River country today?

MR. McDONALD: That is not correct, Mr. Frawley.

MR. FRAWLEY: Q. Mr. McDonald is answering. What do you say about that, Mr. Kayser?

A. Well, I understand there is escalation in the producers' contracts.

Q. That is perhaps what Mr. McDonald meant when he said that that was not correct?

THE CHAIRMAN: Let us just have the one witness answering. Mr. McDonald, perhaps you could just hold it for a minute.

MR. FRAWLEY: I am aware that Mr. McDonald is a mine of information about Westcoast.

THE CHAIRMAN: You did not say a "well" of information.

MR. FRAWLEY: Well, if I said one well it would not do him justice at all: it is a whole field.

Q. Mr. Kayser, I put it to you again that we can look to the 22¢ as the limiting factor which



required whatever kind of contract that we now have to be offered to the gas producers in the Peace River area?

A. Yes, it has -- it is the basis upon which you have to figure back to the field.

Q. Yes, and we have -- I said there was no escalation clause, and I was quite wrong about that -- well, perhaps, I was not so wrong ---

MR. CHAMBERS: Just wrong.

MR. FRAWLEY: Q. Well, it is $2\frac{1}{2}\phi$ in 20 years?

A. As an escalation that is not too bad.

Q. Well, there are escalators and escalators, Mr. Kayser.

A. Yes, but we have had a good deal of experience in which we have been doing business on a 3ϕ escalation for a 20-year contract -- some of them 4ϕ .

Q. I do not want to agree too hard with regard to this contract, but in addition to having a $2\frac{1}{2}\phi$ escalation in it there is a penalty clause, too, so we have to take it altogether.

A. I agree with you.

Q. Do you happen to know now what Westcoast is paying -- or, I should say Westcoast (Alberta) -- is paying for gas that they are taking into the line at the moment? Perhaps you do not know that, Mr. Kayser?



A. No, I do not believe do, the way you ask it.

Q. Mr. McDonald knows, but I will ask Mr. Hetherington. Now, that was one condition that you say is traceable directly to the 22¢, this escalation-come-penalty such as we have it in the agreement? That was a very immediate result or consequence of the 22¢ that Mr. McMahon came away from Mr. Fish with?

A. That is right. I have said that the basis of the contracts in the field necessarily was the price at which it was sold to the consumer.

MR. FRAWLEY: Yes.

Just in passing, Mr. Chairman, I want to just read into the record the "Favoured Nations" clause that Mr. Pattillo was referring to this morning. This is just for the purpose of having it before the Commission, and I am reading from an agreement between Imperial Oil Limited and Westcoast Transmission Company (Alberta) Limited dated 21st February, 1955. It is the gas purchase contract with regard to Imperial holdings in the Belloy field in Alberta. Article XIX reads:

"FAVOURED NATIONS: 1. In the event the
"Buyer or Westcoast Transmission Company
"Limited shall enter into any contracts
"for the purchase of gas with any pro-
"ducer or producers of gas, and actually



"take delivery of and pay for gas
"within the Peace River area of the
"Province of Alberta during the period
"of this contract upon terms more favour-
"able to such producer or producers than
"the terms hereof, Seller shall have the
"right upon notice in writing to the
"Buyer to have this contract modified so
"as to make applicable to the sale and
"purchase of gas hereunder such more
"favourable terms as are contained in
"the said contracts with said producer
"or producers. The Buyer shall forthwith
"upon completion of any contracts with
"any producer or producers of gas as
"aforesaid, serve upon the Seller a true
"copy of each such contract."

And I will merely say, as Mr. Pattillo pointed out
this morning, it does not apply to purchasers of
gas in the ground.

Q. Now, Mr. Kayser, I would like to ask
you one or two questions of a very general character.
You told Mr. Pattillo this morning that you were
very well aware that this was Canadian gas that was
being discussed, and you were quite willing that
the needs of Canada should be first taken care of
before there should be any export to the United
States, and you are, I take it, quite strongly of



that opinion?

A. Oh, yes, I think that is fundamental.

Q. Yes. You said you had no reservations whatever in that regard.

A. That is correct.

Q. And I take it that you are, therefore, quite prepared to see, or you are quite prepared to accept, the situation whereby it would be seen that all of the needs of Trans-Canada Pipe Lines for its markets in the Provinces of Ontario and Quebec should be looked after before there should be any question of export of gas to the United States?

A. Yes, sir, I think that is correct.

Q. And you make that statement without any reservations whatever?

A. I do.

Q. And apart from whatever those needs might amount to?

A. Yes, that is so.

Q. Now, I think it is fair to say that you appreciate that coming here at this particular time you are anxious that there should be the maximum of good public relations between your companies and the producers of gas in Alberta and British Columbia -- in Canada?

A. Yes, sir. We want good public relations with all of the people with whom we deal.

Q. And when I speak of there being a



need for good public relations at this particular time you are aware that we are having a rather difficult time because of lack of oil markets?

A. Well, I read some of the things in the papers.

Q. You know that we are in danger of seeing that the voluntary restriction -- the President's voluntary restriction on imports into the Puget Sound area, District 5, may be translated into mandatory restrictions rather than voluntary restrictions?

A. I read an article in the paper that indicated that that might happen.

Q. And you are aware also that at the present time the very large Montreal refinery market is, and has been, supplied exclusively by oil that comes in from outside Canada?

A. I know nothing about that except an article that I read that indicated a substantial amount of it was supplied from Venezuela. I did not know that.

Q. And I am sure for those reasons, and in that kind of atmosphere, you are very anxious that the very best possible public relations should exist between you and your companies, as potential importers of Canadian gas into the United States, and the producers of gas?

A. We are anxious to have good relations,



yes.

Q. Therefore, I put it to you that you should find it very difficult to justify the continuation of the 22¢ that you are presently paying to your supplier for Peace River gas?

A. Did you say I have found it difficult?

Q. I put it to you that you should find it difficult to justify the continuation of that price?

A. No, I have stated my position on that. I have got no business to denounce that contract here before this Board. I can only do that by talking with the people who pay for it.

Q. I cannot do anything more in view of what you say, which is a very understandable position -- I cannot do any more than ask you for your own personal viewpoint as the chairman of the El Paso Company and, I think, the chairman of Pacific Northwest also.

A. It is utterly impossible for me to divorce my personal attitude about it from my official attitude with regard to those two companies.

Q. Would you be prepared to accept a recommendation from this Commission that there should be no difference between the price that you are willing to pay for Southern Alberta gas and the price that you are now paying for the Northern Alberta gas?



A. We could not accept it without going back to the people who are going to pay for it, and determine that they are willing to accept it.

Q. I regard that as so important, Mr. Kayser, that I am going to suggest that you do find out and do tell us whether you are prepared to pay the very 22¢ for the gas, insofar as it comes from Alberta only, that you are now buying from Mr. McDonald's company?

MR. PATTILLO: Will you not help out poor British Columbia?

MR. FRAWLEY: I am very magnanimous, and I include British Columbia as well, but the shoe-maker should always stick to his last.

MR. CHAMBERS: Is that a question or a request -- which?

MR. FRAWLEY: Yes; I am putting a question to the witness.

THE WITNESS: I understand the question and I think I can answer it in his language, that the shoe-maker ought to stick to his last.

MR. FRAWLEY: Q. Well, as a shoe-maker you are a gentleman who goes back to the Board from time to time and discusses matters?

A. That is right.

Q. You are going to stick to that business, are you?

A. Yes, that is my answer.



Q. Are you going to stick to that?

A. That is my answer.

Q. And you will do that, will you, Mr.

Kayser?

A. Do what?

Q. Will you discuss this with your Board?

A. It is not a question of discussing it with the Board. The Board is in exactly the same position as I am in.

Q. Mr. Kayser, I am going to point out to you in a moment or two the seriousness of this insofar as the people who purchase gas in the Peace River area are concerned. You have told me that the 22¢ have set a pattern for gas contracts which Westcoast has been able to offer the producer. We are agreed on that, are we?

A. It sets it for those particular amounts, but there are conditions under which a larger amount could be ---

Q. Up to 2 1/2¢ in 20 years?

A. No, no; it depends on what was the -- what was paid for the gas that came out of the Peace River district other than under this 22¢ contract.

Q. Well, now, I am afraid that I am -- you have lost me there. I will have to tell you that I do not know just what you are speaking of. Would you mind elaborating?

A. I will say it simply in this way:



Suppose that Westcoast sold -- just make it a hypothetical case -- sold gas for 50¢. Then, it would be in a position to make its 7 1/2 per cent return and still pay a very substantially higher price for gas in the field.

Q. That is, Southern Alberta gas?

A. I thought you were talking about Peace River gas.

Q. That is right, I am.

A. But you said "Southern Alberta".

Q. But I thought you now were talking about Southern Alberta gas, and I am talking about Peace River gas.

A. No, I am not. I am talking about additional quantities from the Peace River.

Q. Additional quantities?

A. Additional quantities. This is an illustration. If we were to pay 50¢ for those additional quantities then it would be possible for Westcoast to make its 7 1/2 per cent return and pay a higher price for gas in the Peace River district.

Q. Well, yes, but that depends upon the 22¢ remaining as it is, and there is no escalation in the 22¢.

A. No, but the 22¢ could remain as it is and additional quantities could be bought at a higher price. That would take care of the higher



cost.

Q. I see, and you think that in that way benefit would come -- substantial benefit would come to the people who have now bound themselves to Westcoast for 20 years with a maximum 12 1/2¢ gas price?

A. I think that is the way that thing worked, yes.

Q. Mr. Kayser, you say that you are on the Board of Westcoast?

A. Oh, no.

Q. You have a share interest in Westcoast?

A. Yes, but no representation on the Board, and have nothing to do with the management.

Q. Are you aware of an organization known as Northern Foothills Agreement?

A. I assume it is made up of four of the major companies; is not that right?

Q. Yes; Shell, Texaco, and two other names. Perhaps you know them?

A. Yes, I know them. They are the four majors in what are called the Northern Foothills.

Q. I am glad you know something about that because now we are going to discuss it.

THE CHAIRMAN: Let us get the names first.

MR. FRAWLEY: Q. What are the other names?

Texaco ---

A. Let me see if I can name them. There



is the Texas Company, Shell ---

Q. Mr. McDonald probably can remember them.

A. I can -- Mobil, which is a subsidiary of Socony, and Gulf.

Q. And who?

A. Gulf.

MR. McDONALD: British-American.

THE WITNESS: Yes, through British-American. I thought that was Gulf.

THE CHAIRMAN: May I get these right, Mr. Kayser. Shell, Texaco, Mobil, and now the fourth one is British-American because British-American controls Gulf of Canada; is that right?

THE WITNESS: Well, Gulf controls British-American -- well, I don't care which way; call it British-American.

MR. FRAWLEY: Q. I feel the same way as you do about it, Mr. Kayser. Anyway, that is the fourth?

A. That is right.

Q. I am told that those four companies have formed what they call the Northern Foothills Agreement.

A. That is right.

Q. And that they own about 3 1/2 million acres of petroleum lands in the Peace River country on both sides, Alberta and British Columbia; is that about right?

A. I think that is about right.



Q. And I am told that they will not sell to Westcoast on the present price permit, is that also right?

A. Now, I can't speak for them.

Q. Well, I thought you and I were going to discuss this thing rather freely; but you don't know that?

A. I didn't know it; I have no way of knowing it.

Q. I am putting it to you that that is so. You just are not in a position where you can accept it, eh?

THE CHAIRMAN: Well, the witness says he does not know.

MR. FRAWLEY: Q. Then you cannot accept that, if you do not know?

A. I am accepting anything you tell me as a fact, but I don't know other than as you told it to me.

Q. Well, we will perhaps be getting into assumptions and I could pursue it more rapidly with either Mr. McDonald or Mr. Hetherington.

A. That is up to you. I am willing to answer anything that I know.

Q. You have obtained some increases in gas prices that you are supplying to the distributor.



When I say "you" I mean either Pacific Northwest or El Paso. You have obtained some increases in price?

A. We are regulated by the Federal Power Commission and permitted to earn, heretofore, a rate of return of 6 per cent. We have not been able to keep up with that, because of inflation, but we are now trying to get the right to earn $6\frac{1}{2}$ per cent and, of course, we have had necessarily to file, from time to time, rate applications to get a sufficient amount of revenue to produce that amount of return to the company.

Q. Well, let me put this to you this way: at the prices you are now getting, apart from what you have filed for and by way of increases, at the prices you are now selling to your distributors are you able to pay more than 22 cents to Westcoast at the border?

A. Not without having to take the additional amount into account and making application for a rate increase for that additional cost, as well as others that probably will occur between here and the time that that might take place.

You understand it is not sensible, in utility operations, to run down to the Federal Power Commission and try to file an application for a rate increase every time you have a small amount of increase in your costs. There is no



way to do it from a practical standpoint except to stand the gaff as long as you can and then come in with a rate application and hope to get the Commission to let you have it.

Now, we have been doing that for ten years and we have never caught up quite; but we are not complaining about it. That is part of the business. We like the business. We think it is a good business.

Q. Under your present set-up, and without going to the Federal Power Commission, with respect to this particular matter could you not pay more than 22 cents with the ultimate object of paying more to the gas producers in the Peace River country?

A. We would, if the Commission would permit us to pass it on and the rate payers were willing to pay it.

Q. Without going to the Federal Power Commission at all ---

A. No, we would impair our rate of return if we did that.

Q. To what extent?

A. I have not made the calculation.

Q. To a serious extent?

A. To just as many dollars as it would be increased, and that would be serious.

Q. You feel you could not improve



the Peace River gas producers' contracts at all without going to the Federal Power Commission for authority to increase the rates at which you sell your gas to the distributor?

A. It is imprudent for any utility that is limited to a specified return, as we are, to assume any cost that cannot be passed on to its customers. That is fundamentally wrong and I do not say you cannot assume it over a short time, but if you are reasonably sure you are going to have to stand it from there on, it is an unsound policy to pay it.

MR. FRAWLEY: Thank you, Mr. Kayser.

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MR. HELMAN: Can I ask one or two questions by way of anticlimax?

THE CHAIRMAN: We have no objection to that, Mr. Helman. I think Mr. Kayser is quite willing to endeavour to answer further questions.

THE WITNESS: I would be delighted to answer.

BY MR. HELMAN:

Q. Mr. Kayser, can we detach ourselves from these vast areas and just come down to Calgary, for a moment. The price that was given to us by reason of the operation of the so-called Calgary plan by Mr. Hetherington arrived at a cost of gas



in cents per Mcf, starting in 1960, of 18.25 cents and running on from there, and I observe that he put in, as his return on investment, a rate of 7.5 per cent.

Now, as I understand your evidence, you are presently getting, in the United States, only 6 per cent return on the investment?

A. Yes. We have filed an application which should yield us $6\frac{1}{2}$ per cent. I am willing to speak of our return as a $6\frac{1}{2}$ per cent return.

Q. You will either have a 6 per cent or a $6\frac{1}{2}$ per cent return when that application is through, depending on whether it is granted or not?

A. That is correct.

Q. Therefore, if Mr. Hetherington had calculated the cost of gas here on the basis of 6 or $6\frac{1}{2}$ per cent, we would arrive, obviously, at another figure?

A. Yes, sir.

Q. Now, in your brief -- and I am now reading from page 5, Mr. Kayser -- you have a heading here, "Local Canadian Demands."

A. Yes, sir.

Q. And it reads:

"In respect to local Canadian
"requirements, because the various
"sources from which the El Paso System
"draws gas, large sources of supply at



"both ends of the system as well
"as in the approximate middle, it
"has great flexibility in meeting any
"deficiency of gas supply from any
"particular source on its entire system.
"For this reason we believe we will
"be particularly fitted to cooperate
"with Westcoast in developing and sus-
"taining its plan as presented in the
"brief to develop large supplies of
"sour gas or sweet gas and make appro-
"priate quantities of such gas so develop-
"ed available for local demands."

Now, I am going to suggest to you,
Mr. Kayser, that having regard to the flexibility
of the El Paso system which you mention there --
and I suppose that includes the Pacific Northwest
system -- that there should be no difficulty
in Westcoast supplying peak load requirements
for the customers of the Canadian Western
Natural Gas Company.

A. Well, we are in a position to
help in that respect but, because of the climate
situation here and the great variance in peak
loads, I don't know of any practical way except
that as outlined by Mr. Hetherington to supply
those peak demands, namely, to use, just as we
do in our system, dry gas, as we call it, as



distinguished from residue gas; dry gas fields that have large deliverability, to use them as the means of covering peak demands.

Now, I understood from Mr. Hetherington's testimony, I believe, the Carbon, as you call it, is a sweet gas field and has high deliverability. The practical thing is to use those to whatever extent they can. We, however, do have a flexibility with which, in case of necessity, we can help in covering peaks.

Q. I have asked a number of witnesses this question and I have always been checked because I have been told they did not know, and perhaps you can tell me:

Has your system got storage fields?

A. We have a storage field, in the field, that is capable of taking in 70 million a day and giving up 70 million, and we use it six months of the year to put gas into it and six months to take out, roughly.

Q. That is El Paso's system?

A. Yes, in the Permian Basin, and that is, of course, a very small storage arrangement for so large a system.

Q. Has Pacific Northwest any storage fields?

A. No.

Q. Will it develop any in the near



future?

A. We expect and we are now carrying out investigations to determine whether or not some structures may exist in the States of Washington or Oregon that are now filled with water and that would be gastight and could be filled with gas so as to provide a substantial storage at the market end of the line. That is what is needed.

If I may be permitted to say this, in this connection, obviously the best and most economical storage is a natural storage of a free-flowing sweet gas field, because nature has already given you the pressure; you do not have to put the pump to it and raise it up; you do not have to fill it against pressure. You only take out at its own normal pressure as you need it, and we do that with dry gas fields in New Mexico in relation to our total demand.

So it seems to me the most practical way of covering your continuous peak situation in the winter would be to have access to dry gas fields that have substantial permeability and are free-flowing wells.

Q. What I was going to suggest to you was, that there was no reason, Mr. Kayser, why, during our peak load requirements, you should not permit these supplies from Westcoast to come to the City of Calgary and, at the same time, use up your



storage fields that you have on your system for the periods of time that we require peak load facilities.

A. Well, let us be practical about this thing.

Q. Why, certainly.

A. It gets cold up here, colder than where we live; but practically every one of the cold spells that hit you flow down across us.

Q. But not at the same depth.

A. Not what?

Q. Not quite as cold.

A. Oh, no; but, nevertheless, they do create peak days in days of cold weather.

Now, that creates a problem for us, but I am perfectly willing to say to you that because of the size of the lines involved in the transactions we are talking about there is substantial pack in those lines that can be useful both to you and our system.

Q. You mean the lines themselves have storage space in them?

A. They have pack in them.

MR. HELMAN: Thank you very much.

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THE CHAIRMAN: Mr. Chambers, I assume you want to ask Mr. Kayser some questions? I



just wanted to find that out from you because it is my intention to call for a ten-minute break.

MR. CHAMBERS: I do not propose to ask Mr. Kayser any further questions.

THE CHAIRMAN: You do not?

MR. CHAMBERS: Do not.

THE CHAIRMAN: Then I do not think this will take -- oh, no, I think we had better have our ten-minute break now.

---Short recess.

THE CHAIRMAN: Gentlemen, the Commission will now resume its hearings.

MR. FRAWLEY: Mr. Chairman, I would like to ask Mr. Kayser just one more question.

THE CHAIRMAN: I am sure Mr. Kayser will be willing to submit to it.

BY MR. FRAWLEY (Cont'd):

Q. Mr. Kayser, if you turn to page 33 of the Westcoast Transmission submission, there are set out the contracts which Westcoast has both on the British Columbia side and the Alberta side and, looking at the contracts in British Columbia, you see there that Gulf State Oil Company of Canada and El Paso have contracted with Westcoast.

A. Yes, sir, that is correct.

Q. And El Paso has a large interest in



Gulf State Oil?

A. Yes, it has about a 15 per cent to 18 per cent interest in Western Natural, which, in turn, owns Gulf State Oil of Canada.

Q. And El Paso and Natural -- what did you call it?

A. Western Natural Gas.

Q. They are associated, of course, as you told us?

A. That is correct.

Q. Westcoast will require further quantities of gas out of the Peace River district other than those set out on page 33 of the submission?

A. That is correct.

Q. Can you tell me what price, at the wellhead or what gathered price this Gulf State-El Paso group will ask for those further requirements?

A. Well, I think I can answer it this way, that we recognize we are not in a very good position about it, but we certainly want all we can get.

Q. When you say "we" you are a seller now?

A. Yes, I am speaking of El Paso and Gulf State. We are not in a very good position because of our dual interests on both sides of the proposition; but we certainly want all that we can get, I will tell you that now.



Q. Subject to that difficulty you might find because of the joint interests, you are going to get a better price than what you are now signed up for?

A. Yes, sir, we want a better price.

Q. You think you will get a better price?

A. Well, we hope to.

Q. I am not saying how much better, but you hope to get a better price?

A. We certainly hope to.

MR. FRAWLEY: Perhaps I can make this clear by making a statement. The price I was referring to in the one-price purchase contract in the Alberta Peace River district which I did refer to, I want it understood, is not a wellhead price -- and I would like Mr. McDonald to correct me if I am wrong -- but a gathered price.

MR. McDONALD: That is correct.

MR. FRAWLEY: So the wellhead price would be something less, again?

MR. McDONALD: That is correct.

THE CHAIRMAN: Thank you, Mr. Frawley.

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BY THE CHAIRMAN:

Q. Mr. Kayser, in August last the Pacific Northwest gave notice to all its customers,



including Westcoast, of a 2-cent increase in rates?

A. That is about right, I think.

Q. At that time B. C. Electric was getting gas from Pacific Northwest, and that increase applied to B. C. Electric, I believe?

A. That I don't know. I didn't know that B. C. Electric was a customer of Pacific Northwest.

Q. Of Westcoast?

A. Well, it is a customer of Westcoast.

Q. The increase, as I understand it, came right straight through the B. C. Electric.

Perhaps Mr. McDonald can tell us.

MR. McDONALD: That was during the course of the interim supply of gas to the Vancouver area.

THE CHAIRMAN: Q. Under those circumstances, do you think it is the right thing for Canada to be in a position that she cannot increase the price to the United States and keep up with rising costs when it can come backwards that way?

A. It was only temporary, wasn't it?

Q. I hope so.

A. That was only a temporary arrangement for the gas.

Q. It does seem unusual, doesn't it?

A. Yes, sir, I will have to say that it is unusual.

Q. You said this morning, I think, that



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gas should flow in whatever direction it is most economic, but I am sure you would agree that that would be consistent with the national interest?

A. Yes, sir. Well, gas that comes across the international boundary has to be based upon the economics of both nations that are involved.



Q. Now I am going to release you from your oath and ask you for your opinion and I am going to direct this question to you having regard to your vast experience in the gas industry and all its operations and its financing: would you care to give the Commission any suggestions which might help in so far as making any recommendation as to how the national interest of Canada might be protected in any export policy relating to gas.

You are not on oath.

A. Not on oath?

Q. You can discuss it, if you care to.

A. That is, generally, a question of policy?

Q. That is correct.

A. From a national standpoint, of Canada?

Q. That is correct, sir.

A. As to what its general policy should be?

Q. That is correct, sir.

---Whereupon the witness remained at the witness stand but testified further, upon release from oath:

A. Well, I would say what I said to a meeting of the -- not the Board but a number of the



Board members in a finance committee meeting of the Sun Life in Montreal, that the economy of Canada is largely supported by the exportation of its natural resources, of which it has a great abundance; that gas is not substantially different from the other resources that you are exporting, lumber, pulp and the various other things, nickel, copper, oil and so forth, and it would seem to me that your policy should be, substantially, the same as it is in relation to the others.

Obviously, you are not exporting anything so important as energy to the injury of your own economy. You do not have to think but a moment to know that our entire standard of living is based upon our use of energy. If you do not have any such use, you are remanded back to these strong arms and these legs. From a standpoint of energy resources, you are entitled to give it more careful consideration than you would give other things which are not related to energy.

Now, I think that the general policy that I understand to have been advocated and generally thought of as being sound is that you should determine what your surplus is above the needs of your own consumption. Some people have said it should be for fifty years or one hundred years. I think, now, that is not practical. Over a period of twenty-five or thirty years, that is as far as anyone can



be expected to look forward; so that when you have made provision for your own demands over that period, it seems to me that you have surplus and that you should be willing to export it.

Now, I am like your geologist. I think you have a great potential, but you cannot afford -- now, you asked me for my opinion and I am voicing it, for once, from the position I am presently in -- you cannot afford to say, of your own demands, "Yes, we will find a great deal more gas and, therefore, we can export most of the proven resources right now."

You cannot afford to do that. You should have your own demands in at least as good a position in respect to export as the customer who takes the export will be in when he gets a contract for your gas; that is, with a supply over twenty-five or thirty years. But when you have determined that, in my own judgment, with the little I know about the balance of trade between two countries, a pipeline connection with an export that occurs continuously through that pipeline so that you can calculate, years ahead, what that is going to be worth to you from the standpoint of balance of trade, taxes and so forth, I think that is certainly an excellent method of export trade.

Obviously, it is good for us; I mean, we do not have to argue about that.



So you take all the evidence that is before you -- and there is a great mass of it -- and use your judgment as to how far you want to go in evaluating it and, obviously, you should not make any mistakes, yourself (I am sure you won't) but, when you have done that, I think you can, with confidence, export and get the value of that continuous source of revenue.

That is my judgment.

Q. Well, sir, in furtherance of that, may I say this and ask your reaction: once a market in such a thing as natural gas has been established in another country with sources from another country, with the terrific investment in pipelines and distribution and, indeed, a dependency by industry and all the other uses to which natural gas is put on that source of supply, does it not become something that is so vested that, even though a contract is given of twenty years, it would be a very, very difficult thing to not continue it?

A. I think that is an element that must be considered. You cannot lightly say, "All right, we will let this go now; we have got it and it looks like we have got plenty, but, if we ever get pinched, we will take it back."

I think that is not going to make for any good relations between two countries.

So you have to use judgment, taking into



consideration that to take it back is not as easy as it sounds in just speaking of it now.

Q. Then where, to whom and what market gas leaves the country is a very important consideration, apart altogether from price?

A. Yes, it is. I think that that is true. We take it into consideration, ourselves, in the service to our own customers. Everyone is familiar with the interruptible lull and that is based upon the fact that the customer can easily substitute another source of energy for the one you have been supplying.

N w, the same kind of thing would be an idea that you have to take into consideration. However, from your standpoint of long life, frequency of demand and a thing upon which you can depend as a source of revenue to your country, the general use of gas by population, I think, is more dependable for you than for a particular industrial purpose and I think that, in the long run, it will be more satisfactory to you to go ahead and assume those obligations, as far as you want to assume them (now, you should not over-assume them); but assume them as far as you want to assume them, expecting that you would fairly well continue on unless conditions radically changed.



I cannot help but say this: so far as I am concerned it looks to me like the economies of the two countries are pretty closely bound; not only the economies but the peoples themselves. I feel that way when I come up here and I hope some of you feel that way when you come to us.

THE CHAIRMAN: I think we all feel that way.

A. And I think a reasonable sharing, if you want to say it that way, not taking into account all the dollars that change hands, but all the natural resources, particularly energy, is a thing that is proper and normal and in the long run will produce the best development in both nations.

THE CHAIRMAN: Of course, Mr. Frawley, some of the oil producers would share those sentiments.

Mr. Kayser, on behalf of the Commission I want to thank you very much, indeed, for coming here. You have been very good in submitting yourself to examination and answering to the best of your ability, which has been high, all the questions put to you. We are particularly grateful because the Commission does intend to make an interim report on certain aspects of the gas industry as soon as possible after obtaining all



the evidence and your presence here today has helped us very much.

A. I want to say your talk to me, then, is full compensation for my having come.

THE CHAIRMAN: Yes, Mr. Pattillo?

MR. PATTILLO: Mr. Chairman, I had been proposing to call Mr. Hetherington as my next witness but in speaking to Mr. Chambers and the gentlemen Mr. D. P. McDonald made it clear to me that he took full pride of authorship for the brief so I have suggested, in fairness, the proper thing to do is now swear Mr. McDonald and I will direct the questions to Mr. McDonald with Mr. Hetherington sitting there and they can elect which one is going to answer the question with both under oath.

THE CHAIRMAN: Very well.

MR. PATTILLO: Would you please swear Mr. McDonald.

---D. P. McDONALD, sworn.

MR. PATTILLO: This group of questions that I propose to direct now is going to be directed to the production of the Fort St. John area including the by-products and I am directing your attention, starting at page 33 of the brief and also starting at page 13 of the prospectus of Westcoast and dated September 11, 1957. In the prospectus, page 13, about the middle of the page appears this statement:



"Approximately 65 per cent of the
"gas initially contracted for purchase
"by the company is covered by contract
"with Pacific Petroleums Limited and its
"associated companies."

And looking at page 33 of the brief, we see, beginning with the British Columbia situation that Pacific Petroleums, beginning November 1st, 1958, is supplying 230,000 Mcf; Phillips Petroleum Limited, commencing next year, agrees to supply 62,500 Mcf and beginning next year, J. B. White agrees to supply 30,000 Mcf and beginning next year Gulf State Oil, etc., agrees to supply 5,000 Mcf, so that, am I correct in thinking that for this year, 1958, the whole of the supply in British Columbia is being put up by Pacific Petroleum?

MR. McDONALD: That is true. The gathering system is only constructed to the Pacific Petroleum field; in 1958 the gathering system added the other fields by about November 1st, this year.

Q. And of these other three companies or groups, has Pacific Petroleums Limited any interest in any of them so that any of them might be considered associated companies?

A. No. I would say not. They have no interest that I know of in Phillips or J. B. White or Gulf State or El Paso. When I refer to associated companies, Canadian Atlantic Oil Company,



Westcoast Production Company, Sunray Oil Corporation, Permo Gas, and people that are under contract with Pacific.

Q. I am looking at the situation shown on page 33, at the bottom of the page, for the Province of Alberta -- the first two -- that is, Pacific Petroleums Limited and then Pacific Petroleums and Westcoast Production Company are presently supplying 50,000 Mcf. They come within the associated groups?

A. That is right.

Q. The other three, we know Imperial Oil is not in any way an associated company but what about Pathfinder?

A. That is not an associated company, but that company owns part of the Pouce Coupe field. Royalite, Canada Fina are not associated either.

Q. Mr. McDonald, would you mind looking at the brief that was presented to the Federal Power Commission on behalf of Westcoast Transmission Company Inc., dated April 26th, 1954, and I refer you to Appendix B and C?

A. Yes, I have them.

Q. Now in that Appendix B, under Alberta, at that time you had purchase contracts with Hudson Bay Oil and Gas, Union Oil Company of California, Texaco Exploration Company, all of whom apparently are no in under the present scheme?



A. That is right.

Q. What is the explanation for that?

A. We offered to the group, as you will notice the group operates the two fields, Tangent-Dunvegan -- we offered a contract to our producers in Alberta and they did not see fit to execute it.

Q. Although they were in the original scheme?

A. Yes, they were in the original scheme.

Q. And then, looking at Appendix C, we have letters of intent and, in British Columbia, am I correct in thinking that the letters of intent existed under the original scheme from Socony Sun Oil Company, both of whom are not in the present scheme?

A. You will notice that Blueberry Creek is White and Lloyd. I believe White and Lloyd have computed in their contract both the Sun Oil Company lands.

Q. So the Sun Oil Company must have sold ---

A. Farmed out or some arrangement, so we are under no necessity of dealing with Sun Oil Company. Socony Vacuum is one of the partners in the Northern Fields agreement group and now known as Mobile Oil.

Q. It is not entered?



A. No, we do not have a contract with Northern Fields agreement.

Q. Then were there letters of intent in Alberta dealing with Eaglesham? That, as I understand it, is in the Socony ---

A. It is in the same group as Tangent-Dunvegan ownership and is not included.

Q. And did not come into the scheme?

A. That is right.

Q. Dixonville?

A. That field, on further exploration, did not turn out to be a suitable field and was not considered.

Q. The Heart River field?

A. That is a very small field and not taken into account.

Q. Then Valleyview field?

A. That is a very small field and it is not accessible to the pipeline at the present time.

Q. What about Whitelaw?

A. Whitelaw was an option on gas and Whitelaw is detailed in my brief. The matter will be reconsidered this year as to whether or not that will be taken into the system this year.

Q. That is an option they must negotiate with you some time prior to January 1st next and if you cannot agree upon a price, then after that date they are free to deal with whomever they wish?

A. That is right.



Q. And this Stanolind Oil and Gas Company, South Pouce-Coupe -- is that what you call it?

A. South Pouce Coupe field, yes.

Q. And the Dunvegan field -- you do not have a contract?

A. No.

Q. Now, is the reason for not having these contracts which were either contracted for or for which you had letters of intent under the original scheme the dissatisfaction of these producers with the prices that are presently being offered?

A. Well, that could very well partly be so. There are other matters to be taken into account such as funds for development, drilling, the timing of their budgetary requirements, and things of that kind. Now, what was the major factor in their decisions in 1954 or 1955 I could not, of course, say. Price is not the only factor.

Q. Have you given any consideration to how long the present reserves that you have under contract in the Peace River area will permit you to meet the projected supply requirements of Pacific Northwest, Inland and B. C. Electric?

A. Yes, we have, Mr. Pattillo.

Q. And how many years do you make it?

A. Well, in excess of eighteen years. I



am speaking of delivery, and that is what you are referring to?

Q. Yes.

A. Yes, on the basis of 400 million cubic feet a day discounted at 90 per cent. it works out in excess of 18 years.

Q. So there will have to be further gas reserves obtained from some source in that area to carry out the terms of the contracts?

A. Well, all that has to be done is to drill a few more wells. There are a great many millions of acres that have not been developed.

Q. In the areas - - -

A. Yes, in the areas.

Q. - - - that are under contract - - -

A. - - - that are under contract to us, yes.

Q. Now, as I understand it from the brief, looking at page 34, there are base prices shown with the base price of 10 cents effective to January 1st, 1963 and then the escalation commencing, which finally gets to a price of 12 1/2 cents in the year 1977 with a penalty provision that can be as high as four cents depending upon volume.

A. That is right, Mr Pattillo, except I do not consider it a penalty. I consider it as an adjustment which is fully justified by the economics of transmitting gas.



Q. That is the way you look at it?

A. Yes. I might explain, Mr Pattillo, that the 1/4 cent to 2 1/2 cent rate increase is the normal escalation which is as a result of the pipeline. As you continue to operate a pipeline over the years the capital cost or the carrying charges of the fixed capital is reduced by the amount of your amortised payments. The net result is that your interest goes down, and the result is that the table is related to the decreasing expenditure of the company. In other words, we have more money to pay for the gas so we have made it available to the producer, and that is the basis for the step escalation that Mr Kayser referred to, except in the United States the escalation is usually made on the basis of five-year intervals. Obviously, the type of escalation that we have here, where the one cent is cumulative each year, results in a much greater amount of cash money in the hands of the producer over twenty years than taking it in three steps of a cent apiece. This is, I believe -- and I can be corrected on this -- the first time that this type of escalation has been introduced into a large scale gas operation in America. As a matter of fact, I have never seen a contract in the United States that has this type of escalation. Trans-Canada copied this contract when they entered into their contracts.



Q. They did a little better in the move?

A. Well, it is much more favourable to the producers than the usual type of contract in the United States with the usual escalation. Now, I will finish with my own table of adjustments. The cost of transmitting gas is directly related to the volume. Obviously, you can transmit 460 million cubic feet a day at a more favourable rate than you can 300 million cubic feet a day, or less, and the adjustment table is related to that particular function of gas with the result that we pay six cents for gas when we are below 300 million cubic feet a day, and as we accumulate our firm gas sales up to 460 million cubic feet a day we arrive back at the ten cents which we refer to in the first table, and that is a function of gas which, again, is something that is sound from an economic standpoint, and it enables the new pipeline company in Canada to serve its market in that way instead of doing it on the basis, say, of United Gas Company and El Paso and Tennessee Natural Gas, and all the other big companies. Instead of buying their gas at two, three and four cents in the field like they did they started out by saying: "We have used this adjustment to give us the same rate that every natural gas company in America got when it was instituted."



Q. Will you explain to me what, at the present time, the gas producers are getting? How much of this adjustment for transport is in effect?

A. At the moment the four cents is in effect at the moment.

Q. I see.

A. That might change any time this year.

Q. That is because there is less than the 300,000 - - -

A. That is right, Mr Pattillo.

Q. Now, can you tell me, Mr McDonald, when you have quantities less than 300,000 moving through the line a day how much is that costing for transmission per one hundred miles?

A. I have not any figures of that kind at the moment.

Q. Well, there must have been some calculation as to what it was probably going to cost to bring this figure of four cents into play on the basis that you have just told us?

A. Yes, these were worked out on a pro-forma basis.

Q. Let me get to this, then: When the pipeline is transporting 460,000 a day what do you then estimate your transmission costs are going to be per one hundred miles?

A. I have those figures -- I did not work out any cost of transportation figures at



460,000 feet a day. I will have to do that for you.

Q. Well, what have you worked them out at, Mr McDonald? At what volume have you worked out your transportation costs?

A. The best I can do for you on that, Mr Pattillo, is to refer to Exhibit C in which we have our actual costs.

MR PATTERSON: The very back page?

THE WITNESS: Yes, at the very back of the exhibits. In the cost of a pipeline you understand that you calculate everything. You have to relate it to gas, and you have to relate it to volumes, and the cost on the basis of 450,000 Mcf per day -- the cost of moving the gas in the Pacific northwest, 300 million feet a day, is between 19 and 20 cents.

Q. To move it?

A. Yes, per Mcf, and that is the closest I could come to it, and that includes the full price of 6 cents, or whatever the full price is for the year 1960.

Q. Well, with that volume there would be -- that would include the full price of - - -

A. That is the full price of 8.09 cents, I think.

Q. That is the adjusted price after you have taken into consideration what you have got out of



the by-products, net?

A. No, that is the price shown by the schedule under the contract itself. You see, the volume for transporting is 415 million cubic feet at that particular price in 1960.

Q. Yes?

A. And under your schedule with reference to your contract which you referred to the amount was between 400 million and 425 million less the adjustment for pressure base, and it works out in the neighbourhood of 8.09 cents.

Q. 8.09 cents?

A. Yes.

Q. And the difference -- then, you would figure it costs you another 12 cents to transport it?

A. Something in that neighbourhood, yes.

Q. Something in that neighbourhood?

A. Yes.

Q. And with your volumes presently down then it is costing you - - -

A. It would be something more than that. Just go to the year 1958, and the same would -- yes, it would be more than that because, you see, we have invested capital in machinery and pressure capacity, and the ability to pump 450 million cubic feet a day.

Q. Yes. Well, would it be correct to say that at the present time it is costing you, so



far as the gas delivered to Pacific Northwest is concerned, having regard to what you pay the field producer and your cost of transmission, more than you are receiving?

A. From the Pacific Northwest?

Q. Yes.

A. Decidedly not. We are only paying six cents for our gas, which reduces the overall cost by two cents.

Q. Yes?

A. And it would come well within the 22 cents.

Q. You say you would be well within the 22 cents?

A. Yes.

Q. And when you get to the 12 1/2 cents to the producer will you not at that time, with no adjustment upwards in the price, have a combined cost that will be more than the 22 cents?

A. Decidedly not, Mr Pattillo, because the increase is compensated for by the decrease in the interest that we pay out, so it does not affect our net return to the company at all.

Q. Will you work out some further calculations for us on that, and have them for us tomorrow, Mr McDonald, because according to the calculations which have been worked out roughly by us -- you must appreciate that we are not in the



gas business --it would seem to us that there were periods of time when the two were exceeding 22 cents? That is from the figures that we had, and, as I say, we do not pretend to be in the gas business, and we we would like some further work done on them so that we can be sure about them.

A. Yes. Well, I will be glad to work it out and explain it to you tomorrow. You do suggest we work it out for you for 1958, 1959 and 1960?



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Q. Yes. Will you explain to me regarding the sale contract of Pacific Northwest what this means on page 9 where it says:

"The Buyer agrees to accept and pay for
"for all gas delivered by the Seller
"to the Buyer under the contract term
"provisions herein prior to January
"First, 1959 at demand and commodity
"rates which are based on 90% load
"factor resulting in a price of twenty-
"two and one-quarter (22 1/4¢) cents."

What does that mean?

A. That means your demand charge for the maximum day plus the commodity rate for the volumes of gas actually delivered, when added together at the end of the year will give you a billing that is equivalent to 22 1/4¢ for all of the gas delivered during that period. I think it is that particular year and thereafter it is 22¢, but you bill monthly on a demand commodity basis.

Q. That is just what I want to get at: in order to come up with that calculation on the assumed quantities, what demand and what commodity price do you have?

A. The demand charge per month is \$1.163; that is per month of contract for demand and the commodity charge, 18¢ per MCF. That is during the period that 22 1/4¢ is in operation and during the



period that 22¢ is in operation the demand charge is \$1.095 per month and the commodity charge is 18¢.

MR. FRAWLEY: What is that again?

A. The demand charge is \$1.095 for the 22¢ and 18¢, the commodity charge.

MR. PATTILLO: Q. The demand charge at the B.C. Electric is \$3.21 a month.

A. I believe it is marked \$3.21.

Q. And the commodity charge is how much?

A. 20¢.

Q. And the same figures apply to Inland?

A. That is right.

Q. When you make up that demand charge that you have just given us and that commodity charge, you calculate the two of them together to come to the price of 22 1/4¢ or the price of 22¢. Is it based on their taking the figures shown or is any allowance made for the fact they can reduce the quantities they can take by 50 MCF?

A. No, Mr. Pattillo, they are presently under contract to take 250 million cubic feet per day at 90 per cent load factor, which is 225 MCF, and that is what they are to get every day.

Q. But can they not reduce that by giving notice?

A. They must give us 60 days' notice and they can reduce it up to January 1st, 1959 by 50 million MCF, but they have not given us that notice



as yet.

Q. Let us assume they did give that notice; then what?

A. Then, if they gave us notice the demand charges would be calculated on 200 MCF, which would be 50 MCF less than the present contract demands.

Q. And you would come up with different figures?

A. No, you would still have \$1.163 -- I am not sure of that and I will have to get the rate man to figure that one. The engineers tell me the demand charges remain the same.

Q. As I understand what this demand charge is, let me see if I follow it through: what are the demand charges in the B.C. Electric contract? If you have a demand charge of \$3.21 a month, you multiply that by 12 and that will give us the demand charge for the year, and you multiply that by the largest quantity that comes through in any one day in the year, and that is what it costs for the demand charge. Is that correct?

A. Not quite. It works on a monthly basis. If you run to January, 25 million is your demand, but in July it gets up to 30; the bills are rendered monthly so when a new demand comes into effect it is in effect from that time forward for the next 12 or 24 months in that particular contract until it gets higher, but the billing is done on a monthly basis,



not a yearly basis.

Q. So, you can keep crashing through.

A. Yes, if they require that gas on a firm basis, we have allocated that part of a pipeline to that MCF and it must be paid for thereafter because we have given up that space.

Q. Does the same thing follow insofar as the U.S. contract is concerned when you allocate to them, in arriving at the figures that you have just given us, 90 per cent of the requirements that they have specified, and while they may give notice to reduce those requirements, what I cannot follow is, then having allocated that much of the space to them and having reduced it by 50 MCF, why there is not some penalty for that reduction?

A. That is not what the contract says, Mr. Pattillo.

Q. I appreciate it does not, but I am just trying to find out why, in the normal instance, there would not be?

A. Well, the contract was written on the basis they may or may not require the full 250 million cubic feet per day or the full 300 million cubic feet per day, and they have the option under this paragraph (d) of Article IV to reduce that quantity. They have not done so, so I assume they are going to take the 250 million cubic feet per day through to January



1st, 1959 and, thereafter, 300 million cubic feet.

Q. You have told us what the figures were, the demand figures and the commodity figures that make up this 22¢, and I would just like to clear up, if I can, what the figures were that were proposed to be charged to Westcoast Transmission when the first scheme was in being.

A. Do you mean in 1952?

Q. The 1952 - 1954 scheme that was killed by the failure to get the permit from F.P.C.

A. Yes. That, of course, was a contract for a much different -- that was a contract between Westcoast Inc. and Westcoast Limited for, I think it was, the maximum at the end of the 5-year period of 149 million feet per day. I think I am right in that. Just a moment until I take a look. Yes, that started out in the first year, Mr. Pattillo, at 66 million feet a day, 92 million the second year, 117 the next year, 132 the next year and then grew up to 149. Now, the price that we worked out on that was \$2.25 per month billing demand and commodity charge at 18¢ MCF.

Q. So that the commodity charge remained the same in the contract with Pacific Northwest, but there was a substantial reduction in the demand charge?

A. Yes, but certainly the big reduction,



the big change -- we did not deliver less than we started out at on October 3rd with, roughly, 150 million cubic feet per day, which is comparative to what we have been doing. We are now delivering, some days, 248 million cubic feet, so there can be no comparison, whatsoever, between the contracts.

Q. Did that contract, the first contract, contemplate an escalation in the prices over the years?

A. No, it did not. As a matter of fact, it was not contemplated there would be any escalation unless with the consent of the customers in the United States that they thought it was in their interest for the escalation to be put there. That was covered by a contract or an arrangement entered into with the Portland Gas & Coke Company sometime in 1953.

Q. I would like to ask you, for the moment, about how this price referred to in your brief on page 47, 48, the San Francisco Bay price of 34¢ and the deduction of 12¢, bringing it to 22¢ per MCF -- was that calculation that we see there, in fact, made at the time, or is it a subsequent adjustment to, substantially, 22¢?

A. I just did not follow your subsequent -- do you mean made out -- the net result was ---

Q. Is that, in fact, the way in which you arrived at the 22¢?



A. As set out in this statement?

Q. Yes.

A. Oh, yes, certainly.

Q. That is, in effect, the way it was arrived at?

A. Yes, strictly competitive factors.

Q. Tell me why, if the gas was not going to go into the San Francisco Bay area, but going to go into an area further north which would cost more to supply from the south, why the reduction rather than the addition of some amount?

A. Well, I will just tell you the circumstances so there will be no doubt about it. It was on June 20, 1954, the F.P.C. decided that the gas that was going to be sold in the San Francisco, Seattle, Oregon, Spokane, that side of Idaho and Utah and some other places, were going to be sold, by Pacific Northwest, from supplies from the San Juan basin. We were the unsuccessful competitor for the right to serve the market, particularly Washington and Oregon, and the only other market we knew of that we could get anybody to be interested in was Southern California; so on June 29, we arrived in San Francisco to see if we could get that market, and as a result of this negotiating which included a lot of different schemes, for instance, to build a pipeline directly to San Francisco from some point on the border of British Columbia and Washington and many



other things were entered into, and the net result was that we found that the price of gas which the Pacific Gas & Electric Company was paying El Paso Gas Company was about 31¢.

During the course of the few days that we were there, an additional contract was entered into between El Paso and Pacific Gas & Electric, which added another 300 million feet a day. In addition, Pacific Gas & Electric had unused capacity in their 2,034 lines connecting the El Paso system and a great many factors entered and, actually, the San Francisco area were paying an equivalent of 29¢; so taking everything into consideration and looking into the future, it looked to us that 34¢ was about the price we should charge for our gas in San Francisco.

Q. I follow that, but if it was 34¢ in San Francisco why was it only 22¢ at Sumas unless it was going to go up into North San Francisco?

A. The only price we ever got in our discussion with anybody to get gas directly from San Francisco via a direct pipeline was 20¢ at the border, which is considerably less than 22¢. We found that the most feasible method of getting gas to San Francisco would be to make use of the facilities of the Pacific Northwest Pipeline, which were already in the ground or going to be put into the ground. So we got together with everybody concerned



and the net result was as described by Mr. Kayser.

There was a charge of a 3¢ figure as being the basis for the use of the facility of Pacific Northwest to Boise with the pipeline built through Boise to North San Francisco for an equivalent cost of 9¢ per MCF, giving a net value of 32¢.

That was just one phase of the discussion; the other phase of it was this: Pacific Northwest had in the San Juan basin -- you realize, the San Juan basin is very much closer to Seattle and Portland than Texas; it is a good thousand miles closer and it is very close to the market area and the cost of transmitting the gas from the San Juan basin to Seattle, as worked out by the Federal Power Commission and approved by them, was 32¢ on the load factor basis we are discussing and the value of the gas in the field was in the neighbourhood of 12¢, and the balance of 20¢ was transportation cost spread over the different deliveries of gas by Pacific Northwest. We took all the factors into consideration.

Our gas, actually, was not being marketed in San Francisco. The real market was in the California area. The best we could look for in the way of supplying the market, even if we sold the gas to Pacific Northwest, the best we could look for would be 22¢ because of the competitive value of the gas in the Pacific Northwest area.



Q. Do I understand you to say if Pacific Northwest had not bought Canadian gas but had brought the gas up from the San Juan basin, it would have cost them to bring it up to Spokane 32¢, consisting of about 12¢ to the producer and 20¢ in transportation? Is that right?

A. Yes, covering all the gathering system of distribution in all the places in which they go.

Q. If it were going to cost them 32¢ to get that gas up there, they have a spread under your contract of 10¢, because they are getting your gas for 22¢.

A. But they also have to, and I hesitate to say how much, about 700 or 800 miles of system before they could market that gas in the Pacific Northwest area. They have to come through the entire States of Washington, Oregon and Idaho, which is a pretty fair piece of country. So to distribute our gas through that country they need the 10¢.

Q. They would still have the same problem of distribution of gas they would bring up from the San Juan basin.

A. Bringing gas from the San Juan basin and distributing it is an easier matter. In other words, the main line goes through their market area.

Q. What I cannot follow -- and I wish you would explain it to us -- is this: if they bring



gas up and it costs 32¢ to come up to Spokane, and you start out at the border with 22¢, how this deal is not a much more favourable deal to have than the one they would have had if they could not get Canadian gas. I cannot see why the whole burden of this 12¢ should be put upon the Canadian company. I cannot see why there was not something in there between the 34¢ and the 22¢ that was an advantage to them.

A. I did not think you could see it, Mr. Pattillo, so I think I would like to introduce an exhibit which was filed with the Conservation Board in Alberta in March of 1955 for the express purpose of clarifying just what your problem is. I have the exhibit available and I will have Mr. Hetherington put it in.

Q. Right. May I have it marked?

A. Yes.

THE CHAIRMAN: I wonder if you have any other copies?

THE WITNESS: Yes, I have, Mr. Chairman.

MR. PATILLO: That will be marked as Exhibit C-13-1.

---EXHIBIT NO. C-13-1: Economics of Marketing
Peace River Gas in the
Western United States.

MR. PATILLO: I was just thinking, Mr. Chairman, it is just about half-past four and I



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really cannot ask any intelligent questions about the matter.

THE CHAIRMAN: It is too bad we had not had this before.

The Commission will now adjourn, and we shall resume tomorrow morning at 9.45.

---Whereupon the hearing adjourned at 4.30 P.M. until 9.45 A.M., Friday, February 14, 1958.

- - -

in English

ROYAL COMMISSION

ON

ENERGY

HEARINGS

HELD AT

CALGARY,

ALTA.

VOLUME No.:

9

DATE:

FEB 14 1958

OFFICIAL REPORTERS

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ANGUS, STONEHOUSE & CO. LTD.
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ROYAL COMMISSION

ON

ENERGY

Hearings held at Calgary,
commencing Monday, February
3, 1958, at 10.00 A.M.

PRESENT:

| | | |
|-----------------------------|----|----------|
| Mr. H. Borden, C.M.G., Q.C. | -- | Chairman |
| Mr. J.L. Levesque, | -- | Member |
| Mr. G.E. Britnell, | -- | Member |
| Mr. G.G. Cushing, | -- | Member |
| Mr. R.D. Howland, | -- | Member |
| Mr. L.J. Ladner, Q.C. | -- | Member |
| Dr. R.M. Hardy, | -- | Member |

COMMISSION COUNSEL:

Mr. A.S. Pattillo, Q.C.

Mr. Miles H. Patterson.

Mr. J.F. Parkinson -- Secretary to the
Commission.

Major N. Lafrance -- Assistant Secretary
to the Commission.



APPEARANCES:

Representing Westcoast Transmission Company Limited; Pacific Northwest Pipeline Corporation and El Paso Natural Gas Company; and Jefferson Lake Sulphur Company.

- | | | |
|-------------------------|---|---|
| Mr. E.J. Chambers, Q.C. | - | Counsel |
| Mr. Webster McDonald | - | Associate Counsel |
| Mr. D.P. McDonald, Q.C. | - | Managing Director
of Westcoast Trans-
mission Company
Limited |
| Mr. C.R. Hetherington | - | Vice-President of
Westcoast Trans-
mission Company
Limited |
| Mr. Coleman R. Sample | - | Ford, Bacon & Davis,
Inc. |
| Mr. F.E. Lewis | - | Vice-President and
Assistant to the
President of El Paso
Natural Gas Co. |

- - - -



Friday,
February 14, 1958.

---Upon resuming at 9.45 a. m.

---Mr. Commissioner Ladner was not present.

- - - - -

THE CHAIRMAN: Gentlemen, the Commission will now resume its hearings. Mr. Pattillo, will you commence?

MR. PATTILLO: Thank you, Mr. Chairman.

Mr. McDonald, I would like to spend a little time on this exhibit which you filed yesterday just before adjournment and see whether I understand exactly what this exhibit shows.

MR. McDONALD: Yes, Mr. Pattillo. That exhibit was prepared, originally, by Mr. Hetherington, and presented by him on previous occasions so, I think, if he dealt with it now, it would be better.

Q. That is fine. Mr. Hetherington, am I correct in thinking this exhibit shows that it was going to cost Westcoast Transmission 22 cents per Mcf to purchase and transmit gas to the American border?

MR. HETHERINGTON: Well, if I might ---

Q. Just please answer my question and then make the explanation. Does the exhibit show it is going to cost 22 cents to purchase and transmit



gas to the American border?

MR. HETHERINGTON: Well, that is not just one hundred per cent correct. That is substantially correct with respect to the gas sold for export.

Q. It would cost 22 cents for the gas sold for export to purchase it and transmit it to the border?

MR. HETHERINGTON: Yes, that cost would include the rate of return to the pipeline company, also.

Q. Rate of return of how much?

MR. HETHERINGTON: Well, it is not just a number.

Q. Percentage?

MR. HETHERINGTON: It is not just a percentage; it varies with the year of service and is the actual dollar amount shown in our Exhibit C.

Q. All right. Let us get at it again another way, then: the exhibit does show that it was going to cost 10 cents to purchase the gas?

MR. HETHERINGTON: Yes.

Q. It shows that it was going to cost 12 cents to transport the gas?

MR. HETHERINGTON: Yes.

Q. And what you are saying is that 12 cents includes a rate of return to the pipeline company?

MR. HETHERINGTON: Yes.



Q. When we get to the border, as I understand, this exhibit also shows it would cost 25 cents to purchase gas and move it to a point in Idaho and costing 12 cents, approximately, to buy the gas and costing 13 cents to transport it. Is that correct?

MR. HETHERINGTON: Yes, sir.

Q. And I assume that 13 cents also includes a rate of return for the transporting company?

MR. HETHERINGTON: Yes, it does.

Q. Then it goes on to show that if they transported that same gas on to the border it would cost 7 cents. Is that correct? An additional 7 cents?

MR. HETHERINGTON: Yes, that is correct; that is the averaging cost from the point in Idaho to the various distributing points.

Q. Right.

MR. HETHERINGTON: From that point in Idaho there are a number of delivery points starting with Boise, Idaho, and continuing on to Spokane, Hannaford, Washington and Seattle.

Q According to this it cost 22 cents to get it up to this northern point in the proposed Pacific Northwest line?

MR. HETHERINGTON: That is right. It was not only proposed, that was the estimated cost



and that was the actual cost, or, I should say the rate that was charged and has been charged for the last, approximately, one year prior to the rate increase that Mr. Kayser referred to.

Q. That is the rate that was being charged by the distributing companies to the cities of Seattle, Spokane and these other northern cities?

MR. HETHERINGTON: Thirty-two cents is the actual rate that was charged for about one year.

Q. Is it not correct, if instead of bringing the gas up from the south you brought the gas down from the north, instead of it costing 32 cents it would only cost 22 cents?

MR. HETHERINGTON: No, no -- and this is the reason. The figure of 32 cents charged by Pacific Northwest was just on the construction of the facilities that they proposed to build in order to supply the Pacific Northwest and it included a large diameter line to Portland, Oregon, which was the principal load and then reducing diameters northward past Tacoma and Seattle, the end of the Pacific Northwest line. That was based upon this 32 cents. There was a 6-inch line extending to Bellingham, Washington, when Pacific Northwest made the arrangement with us to take gas from Canada. This 6-inch line that ran to Bellingham, of course, was not large enough to carry the gas backwards; it was all right to carry the gas north because



Bellingham is a small community and does not require very much gas. So, Pacific Northwest changed their facilities north of Portland. They put in a 26-inch diameter pipeline instead of this series of small pipelines right from Portland to Huntington at the international border so they could carry a full volume of gas imported from Canada.

2. That would not cost them very much.

MR. HETHERINGTON: The actual cost of those facilities, the annual cost divided by the amount of gas they were going to get from Canada, turned out to be 3 cents per Mcf and this incremental cost of taking Canadian gas was thus used by Pacific Northwest in charging 3 cents per Mcf exchange charge to El Paso. In addition to that, Pacific Northwest has this system north of Boise; there is, approximately, 700 miles of system involved and the annual cost of owning and operating that system, divided by the volume of gas sold in the area, as far as the Mcf, is based on the initial facilities they proposed. So, the actual cost to Pacific Northwest of distributing gas in Washington, Oregon and Idaho is the sum of the two figures; the 7-cent figure for the original facilities plus the 3-cent figure for the new facilities required to take Canadian gas, or a total of 10 cents Mcf. So, in order for Canadian gas to be competitive



with United States gas delivered in the Pacific northwest at a price of 32 cents the border price had to be 22 cents.

Q. You really believe that?

MR. HETHERINGTON: Yes, sir.

Q. Well, let us accept that then.

Now, tell us about this 22 cents -- this cost of transmission of 12 cents. Actually, the transmission with the present load you are putting through that line is much more than 12 cents, is it not?

MR. HETHERINGTON: I would like to leave that reply for Mr. McDonald. He has the figures on it.

MR. McDONALD: Mr. Pattillo, in dealing with your question yesterday we got into the matter of allocating cost of transmission facilities.

Q. Right.

MR. McDONALD: The first thing we have to determine is, first: what were the contractual obligations of the company that is building the facilities. If you look at our submission as filed you find we have a contractual obligation to Pacific Northwest of 300 million cubic feet per day. We have contractual obligation to B. C. Electric and Inland Natural Gas of 2 million cubic feet per day. We are delivering only a very small amount to British Columbia today but we are



signed a contract in January, February of 1955 in which we agreed to build facilities to service 200 million feet a day; that is, 130 million to British Columbia and 68 or 69 million feet a day to Inland, making a total, for comparative purposes, of 200 million feet a day. So, as shown by Exhibit C, our investment in those facilities is \$179 million and as of 1958 it will be \$192 million, as of November 1st, this year.

Then we have to take a look at what we have actually built. We have built for a capacity of 500 million feet a day. What we have actually done is built a system which has a nominal capacity of somewhere in the neighbourhood of 425 million per day and an actual capacity of 450 million feet per day. For instance, when we produced our compressor plant, the nominal capacity was 3500 horsepower engines. We, actually, have a compressor capacity of 4200 horsepower per engine.

THE CHAIRMAN: Mr. McDonald, it is difficult to hear you.

MR. McDONALD: I am sorry. I was saying that we have a nominal compressor system of 3500 horsepower of stations but an actual capacity of 4200.

My engineers, after the experience they have had over the last several months, tell me we can deliver 450 million cubic feet a day through



the system. So, for purposes of allocating cost I have taken 450 million cubic feet a day as the capacity of the pipeline system. That is the capacity in relation to the amount of money expended, \$192 million. I have taken the fixed capital cost, taken that from Exhibit C, and for the purpose of convenience I will take the year 1958. You will note the depreciation in the operating statement is \$6,735,000. The general taxes which are, of course, charged against investment amount to \$895,000. Interest, of course, also charged against investment, is \$7,552,000. Amortization of financing expenses, which is also a proper charge against fixed capital, \$102,000. That gives a total of \$15,284,000 of fixed capital expense.

Now, that fixed capital expense is charged, 300 million cubic feet to Pacific Northwest, 150 million to the British Columbia customer. In other words, one-third and two-thirds. The amount allocated to Pacific Northwest, \$10,190,000 which is two-thirds of the \$15 million figure.

The amount of gas transmitted by Pacific Northwest is 83.07 billion, so the fixed capital cost is 12.25 cents per Mcf.

The other costs, then, are costs of



operating a system minus the fixed capital charges including the cost of by-products produced. And the by-products produced are included in the cost in this particular calculation.

And then administration and the other charges. The total of the other costs is \$11,881,000 . . . However, you will note we have included the cost of producing by-products. Therefore, we should take from our costs the revenue derived from the by-products. By-products, of course, include the profits from the gas processing plant which, of course, are not part of the pipeline system but an adjunct to it and this leaves a net total of \$11,713,000. Since these other costs are charged against all of the gas that goes through the pipeline, this is divided by the total gas transmitted through the pipeline during the year, namely, 96.518 billion cubic feet leaving a commodity cost, or other cost, of 7.65 cents which gives you a total cost for the gas transmitted to Pacific Northwest of 19.9 cents without including any profit in the sense of profit over and above interest.



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MR. McDONALD: Now, Mr. Hetherington mentioned that his costs are based on 12¢. At the time the calculation to which he refers was made, the total estimated capital cost in this system was \$142 million. That is for the pipeline and the present actual installed cost which is included in the figures I have here, exclusive of the gas scrubbing plant which, in round figures, I will say cost \$20 million, where we calculated these costs at \$142 million in 1955 our actual investment is \$172 million, so we are very close to the figure of Mr. Hetherington for the 19.9 ¢.

If you deduct the cost of gas, which, in this case, is 6¢, from that figure, you get 13.9¢.

So for the first year of our operation we are awfully close to the 12¢ which he mentioned for the transmission of gas to the Pacific Northwest.

Now, the same figures, Mr. Pattillo and the Board, relative to the year 1959 show 18 1/2¢ as the total cost of transmission and the figures for 1960 are 19.6¢.

Q. Well, Mr. McDonald, you made some assumptions there and I want to be very sure that I understand them. You say you have built a line which has a capacity of four hundred and fifty and, because of the contract arrangements as to ultimate requirements of Inland, B.C. Electric and Pacific Northwest, you have allocated that space two-thirds

1. The first of these is the

fact that the number of cases of

the disease has been increasing

for some years past.

2. The second is the fact that

the disease is now found in

many of the most fertile

parts of the country.

3. The third is the fact that

the disease is now found in

many of the most fertile

parts of the country.

4. The fourth is the fact that

the disease is now found in

many of the most fertile

parts of the country.

5. The fifth is the fact that

the disease is now found in

many of the most fertile

parts of the country.

6. The sixth is the fact that

the disease is now found in

many of the most fertile

parts of the country.

7. The seventh is the fact that

the disease is now found in

many of the most fertile

parts of the country.



to Pacific Northwest and one-third to your Canadian customers, is that right?

MR. McDONALD: That is right, yes.

Q. Now, what I am trying to get at is this: am I not correct in thinking that when a line such as yours is designed, and you have given us this capacity of four hundred and fifty, that is a full line, operating at full capacity, with your present facilities?

MR. McDONALD: I just don't understand what you mean, Mr. Pattillo. That has the capacity when the gas is in it to operate at 450 million cubic feet, that is true.

Q. Yes, and if you had your line full and operating at full capacity, that is what you would be delivering?

MR. McDONALD: That is true.

Q. Now, in fact, at the present time your line is running at about half capacity?

MR. McDONALD: It is running at roughly two-thirds now, somewhere from 270 million to 300 million feet a day.

Q. Let us call it roughly 65 per cent, then?

MR. McDONALD: Yes.

Q. I am correct, am I not, that when one is transmitting gas through a pipeline at 65 per cent load factor, the costs of transmission per 100 miles



are higher than if he were operating at full capacity?

MR. McDONALD: Yes, I do not know that there is any question of that.

Q. Because of the fact that the fixed charges for the system are there whether you are operating at 100 per cent or whether you are operating at 25 per cent?

MR. McDONALD: That is perfectly right, Mr. Pattillo.

Q. Do you also agree with me in this, that in determining costs of transmission, the capital costs which have to come into the picture are greatly affected by the type of terrain through which you build your pipeline?

MR. McDONALD: I can certainly testify to that.

Q. And the terrain through which the Westcoast pipeline was built was not an easy terrain?

MR. McDONALD: That is true.

Q. Now, in the submission of the utilities in Alberta, under Sub-head S they gave to the Commission some figures on transmission economics and they said that a 30-inch pipeline, which is what your pipeline is ---

MR. McDONALD: Yes.

Q. --- would have a daily capacity of 517.



Yours, in fact, would have a daily capacity of 450, giving an annual return of 7.5 per cent and, taking the various costs, they come up with an annual cost, per MCF per 100 miles, on 100 per cent load factor, of 2.13¢; on a 75 per cent load factor of 2.84¢ and, on a 50 per cent load factor, 4.25¢.

Now, wouldn't the first correct thing here to determine be to pay no regard to whether this gas went to the U.S. border or went to Vancouver but to first determine, with the 65 per cent load factor, what your transmission costs were for all of the gas in the line and, if that was done, wouldn't you come up with a figure in the vicinity of 4¢ per MCF per 100 miles of transmission?

MR. McDONALD: I haven't made the calculation, Mr. Pattillo, but all I know is that these are our figures, they are actual and have been done in that way. This is the way you allocate costs. There is no other way I know of to allocate costs in a pipeline except the way I have done it.

Q. I am not certain that I entirely agree with you. You are making the allocation today on the basis of what the line will ultimately carry.

MR. McDONALD: Yes, because that is the investment I have made today.

Q. Actually, the line ultimately will carry more than that?

MR. McDONALD: Not without the adding of



more horsepower, and I have not added horsepower in these figures.

Q. Let us take the present line, which comes to four hundred and fifty. Now, of that, today, you agree that it is only being 65 per cent used and, as I understand it, you agreed ---

MR. McDONALD: No, Mr. Pattillo, please. It is being used 90 per cent by Pacific Northwest, as far as their allocation is concerned. My figures are based on 90 per cent delivery to Pacific Northwest.

Say we are running 20 million feet a day to B.C. Electric and Inland. With the capacity in that pipeline, our dollars in the ground (and that is the only way we can figure it) are paying interest to deliver them 150 million feet. I have, in my exhibit, page 45, the British Columbia markets. Now, these British Columbia markets I have put in this exhibit have potential deliveries and are not fabricated. They are the demands of the market by the B.C. Electric in natural gas and these are the markets they say, "you have contracted to supply to us and we want to be sure you have the facilities to deliver to us."

Look at 1962, which is 231 million feet. This is not the point you and I are talking about. It is 111 million in 1960. You will notice that. At that point they would be about 60 or 70 per cent of



their capacity.

Q. That is a different market than you have today. That includes the market of the new system as well as the present one.

MR. McDONALD: Certainly not. The 1958 market is there, 62 million feet.

Q. Yes, but the figures you are talking about in 1962 I say include the new system as well as the present.

MR. McDONALD: No, sir. I am speaking of what is actually now invested or will be invested by November first of this year.

Q. I know that, but you used a figure in 1962.

MR. McDONALD: Well, I was indicating to you that there is a market demand that we must be now prepared for and in which we now have invested to satisfy. We cannot go in and build in 1962. It has to be built long ahead of that, when you have the people on the ground; that is the time to build it.

Q. I am not criticizing that at all, Mr. McDonald. I quite agree with you. I am trying to get at what is the cost of transmission through the line and, quite frankly, from the best engineering advice and so on I have got and taking the figures, I cannot accept the method of allocation that you have used.



MR. McDONALD: Well, I'm sorry. I have been in this business for a good long time and I have never seen it done otherwise than this way. You take your demand costs and divide them against your demand and you take your commodity costs and divide them into your total volume and that is what you come out with and that is all I have done. There is no other way to estimate costs.

Q. Supposing your sole market over this line was Pacific Northwest.

MR. McDONALD: Yes?

Q. And you built your line to cover their anticipated needs in the future.

MR. McDONALD: That is right.

Q. At the present time you are sending, over the line, something less than their future needs which your line must cover.

MR. McDONALD: That is correct. Not very much; just 50 million feet less, at this moment. I think their figure is 240 million feet, today.

Q. Yes, but they are going to step up their capacity considerably more than that before you are going to have to make any change in the line?

MR. McDONALD: No, sir. They cannot step up one iota before any change is made. The capacity of this line which is not used is entirely for British Columbia Electric and Inland Natural Gas, period, that is the fact.



Q. Have you got a memorandum of those figures that you read off to us which you could file and which we could study, because the results you have given us differ so much from the calculations I have been given that I would like to have them analyzed and, perhaps, ask you some more questions.

MR. McDONALD: Well, I read the figures into the record but I will transcribe them for you.



Q. Thank you very much, Mr. McDonald.

May I just spend a few minutes on B. C. Electric?

MR. McDONALD: Yes.

Q. Now, as I understand it, B. C.

Electric has a principal service agreement, and the prices that you are charging under that agreement are ---

MR. CHAMBERS: What is the page, Mr. Pattillo?

MR. PATTILLO: Page 42.

Q. --- the prices that you are charging to B. C. Electric under that agreement are what?

MR. McDONALD: \$3.21 demand, and 22 cents commodity plus an interruptible rate of 22 cents.

Q. And the quantities that they can take under that agreement are up to 130 million?

MR. McDONALD: Yes, 130 million cubic feet per day.

Q. Yes. Then, in addition to that they have entered into another agreement for the purpose of acquiring gas for a thermal plant which they are building?

MR. McDONALD: That is right, Mr. Pattillo.

Q. And the rates for that are how much?

MR. McDONALD: \$3.21 monthly demand, and 22 cents commodity rate. That is a firm gas contract, Mr. Pattillo.



Q. Very well. So that when these two contracts are being fulfilled -- the customer demand -- and the thermal plant has been built, B. C. Electric will be taking off in the vicinity of 230 million cubic feet a day; is that correct?

MR. McDONALD: No, they will take it off in increasing amounts each year. You will notice in the thermal plant agreement they start at 24 million feet a day on January 1st, 1961, 24 million feet a day in August, and then they go up at the rate of 24 million feet a day, if they require it, for another four years, but that will go up gradually. Similarly, with regard to the 130 million feet a day contract; that builds up as their market builds up.

Q. Well, will you explain to us why this Canadian purchaser, when its volumes get to the amounts anticipated here, is going to be paying so much more than is the United States customer who is taking off at Sumas which is a very short distance from the take-off at Vancouver?

MR. McDONALD: Yes, the explanation is simply that the United States customer is the first customer of the pipeline. He made it possible to build it in the first place, so his gas is being collected from very close to the end of the pipeline, and so is the gas that is gathered by the smaller unit, but to go out and get this



volume of 144 million cubic feet a day we are going to have to go pretty far afield. To get the gas we are going to have to build several hundreds of miles of gathering system which will cost \$100,000 to \$150,000 a mile to build. All that has to be taken into account, so we have taken the gamble here and used our judgment as best we could, and we think this is a reasonable contract having regard to all of the future costs we can anticipate. We think that this thermal plant contract is a very fair contract for B. C. Electric, and it is within reason, so far as we are concerned, but it is a big job to get the gas to the pipeline and deliver it.

Q. You are going to have to do the same thing, are you not, to supply this additional gas that Pacific Northwest are going to take under the option they exercised a while ago. Are you not going to get additional gas for them?

MR. McDONALD: Yes, and it will be gathered along with the other gas.

Q. Are you charging them extra for that gathering?

MR. McDONALD: No, but they are taking that in one lump at one time, and these other contracts are for several years and for different deliveries. It is a different thing entirely.

Q. Does it not amount to this, that



the additional cost of getting this additional gas is being put entirely onto B. C. Electric?

MR. McDONALD: No, I would not say that, Mr. Pattillo. You have to look at the thing as a whole.

Q. Well, you agree with me that there is going to be additional cost to get supplies over and above your present purchase contracts?

MR. McDONALD: Yes, every time we connect a well to our system we must build a pipeline to it, and that costs around \$100,000 a mile.

Q. And those additional costs are not being passed onto the United States purchaser, but they are to B. C. Electric?

MR. McDONALD: No, sir. We have a contract with B. C. Electric to deliver this gas to them at a fixed rate, and we have to handle our economics so that we stay within these contracts.

Q. Did not B. C. Electric take the view that they should pay a price somewhat similar to the price that the United States purchasers pay?

MR. McDONALD: They certainly did, and that is what they got -- and I am using the word "purchaser" as "consumer". The Seattle Gas Company pays the rate that B. C. Electric pays us plus 17 cents.

Q. You do not deliver to Seattle.

MR. McDONALD: No, we do not deliver to



Seattle.

Q. Then, why should the Vancouver price be based on the Seattle price?

MR. McDONALD: Well, that was the competitive price of the gas at Vancouver when we made the contract.

Q. What you are saying is, if Vancouver had wanted to buy gas from Pacific Northwest that is what it would have had to pay?

MR. McDONALD: No, it would have had to pay 3 cents more per Mcf because there is a duty on gas entering Canada.

Q. So you say it is perfectly proper to fix the price to them on the basis of the Seattle price, and make no charge for duty because the gas has come from Canada rather than from the United States?

MR. McDONALD: Yes, the price -- we fixed the price. I can give you the commodity on the competitive value, but apart from that, Mr. Pattillo, the amount of gas that B. C. Electric is buying at the moment is very small compared to the vast investment we have in the project, and the rate that we fixed will over the twenty years, I think, be a fair rate so far as the pipeline is concerned, and an eminently fair rate so far as the purchaser is concerned.

Q. If you would look at the Bechtel



Corporation study, the interim report of July, 1957,
at page H-14 ---

MR. McDONALD: Yes?

Q. I am looking at the year 1958.

MR. McDONALD: Yes, Mr. Pattillo?

Q. That shows a revenue from the gas scrubbing plant of \$4,568,000. Now, is that the net revenue to you after you have given the producers their share of that? Under your purchaser contracts, as I understand it ---

MR. McDONALD: No, that is the gross.

Q. That is the gross?

MR. McDONALD: Yes.

Q. And they get approximately 40 per cent of that, do they?

MR. McDONALD: Yes, that would be one of the costs that is referred to below where you see "Cost of By-products Purchased" under Item 2.

Q. Yes?

MR. McDONALD: Well, that is 40 per cent -- 37 per cent, I think it is, and that is included in that cost of by-products purchased.

Q. All right. Now, if you look at page H-10 ---

MR. McDONALD: Yes?

Q. --- you show there in that estimate for the year 1958 a total gas field purchases amounting to \$103 million?



MR. McDONALD: No, you are looking at the annual volumes.

Q. I am sorry; you are right.

MR. McDONALD: It is 103 billion, roughly.

Q. Yes, and then looking at the market sales underneath -- those are dollar sales, are they?

MR. McDONALD: No, those are billions of cubic feet again.

Q. These are all cubic feet figures?

MR. McDONALD: Yes.



Q. Looking at schedule H6, at the bottom of the page, under the year 1958, there is there a figure of \$18,276,000, which is the anticipated revenue for this year from Pacific Northwest?

MR. McDONALD: Yes, that is correct.

Q. And immediately above that, the anticipated revenue from British Columbia Electric of \$4,002,000; and above that the anticipated revenue from Inland Natural Gas of \$1,985,000?

MR. McDONALD: That is right.

Q. Making a total anticipated revenue of \$24,263,000?

MR. McDONALD: Yes.

Q. That figure is carried forward on table 4 on H14?

MR. McDONALD: Yes, that is right.

Q. Now, you anticipate a revenue of \$4,568,000 from the scrubbing plant?

MR. McDONALD: That is right, yes.

Q. And your operating expenses that you anticipate are \$20,098,000?

MR. McDONALD: Yes.

Q. So that if it were not for your revenue from the scrubbing plant and the revenue from B.C. Electric and Inland Natural Gas, the profit figure shown there, the operating profit figure of \$8,733,000 would come down to a loss picture, wouldn't it? Isn't the profit of this line as it is being operated



today coming from the by-products and the profits made on the sales to B.C. Electric and Inland?

MR. McDONALD: Mr. Pattillo, I see your problem: you fail to take into account that the costs of operating the scrubbing plant are included in the operating expenses.

Q. Where?

MR. McDONALD: On table H14.

Q. I don't think they are.

MR. McDONALD: Yes, they are, in items 2 and 3. So that the way I have calculated this is the proper way of doing it -- crediting to the gross expenses the revenue from the scrubbing plant. A substantial amount of that \$20 million is in the expenses of the scrubbing plant. The only benefit with the cost of transmission which you are trying to arrive at would be from any profit that there might be in the operation, and it certainly would not be equal to the net income of \$1,079,000 that we show over and above all these expenses.

Q. Well, your scrubbing plant, according to H12, has an operating maintenance of \$1,150,000, which is included in the figure of \$2,815,000?

MR. McDONALD: That is right, yes; but, you have to add the cost of the products purchased to that too.

Q. Well, your products purchased ---

MR. McDONALD: Yes, and in addition you



have depreciation, you have taxes and you have everything else.

Q. So, you don't agree with me that the profits from the scrubbing plant operation -- you do admit that operates at a profit?

MR. McDONALD: I believe it does.

Q. Yes.

MR. McDONALD: In the year 1958, yes -- the best forecast we can make.

Q. The best forecast you can make: the operating profit on that is the difference between the \$4,568,000, the \$1,150,000 and whatever part of the \$4,568,000 that you pay back to the producers?

MR. McDONALD: No, sir; plus the amortization or depreciation, plus the general taxes.

Q. Then we come to the B.C. and Inland operations: so far as Westcoast is concerned, in their deliveries to them there is no difference in those deliveries up the line than there is in the delivery to Pacific Northwest, is there?

MR. McDONALD: Well, I just don't follow you, Mr. Pattillo.

Q. You don't have to provide any distribution system?

MR. McDONALD: Oh, no.

Q. So it is exactly the same insofar as---

MR. McDONALD: The same service, except there are more leader stations; there are, maybe, one



dozen delivery points.

Q. For Inland?

MR. McDONALD: For Inland and B.C.

B.C. Electric has seven.

Q. B.C. Electric has seven?

MR. McDONALD: Yes; however, that is not a large expense.

Q. And you don't agree that because of these higher prices you are getting from Inland and B.C. Electric that those higher prices are enabling you to operate this line at a profit, and that without them you could not do so?

MR. McDONALD: No. My position is that I have designed a program to take care of both classes of customers. I have built a gas scrubbing plant and it is in operation, and a gathering system which is in operation, and the whole net result is a profitable operation. When you allocate the cost between the two customers, the United States customers are bearing their share and are paying a profit. I might as well let you have the situation: as far as the British Columbia customer is concerned, allocating to the British Columbia customer 150 million feet of the capacity of this pipeline, and, as I stated before, we must build that line now and invest our money now, and I suggest it is a fair allocation to them. Their share of the fixed capital cost, which I previously mentioned, is one-third. The



allocated fixed capital cost to the British Columbia customers is \$5,095,000 in 1958. Sales in British Columbia amounted to 14,508,000 on the basis of firm sales. If someone is checking this for you, Mr. Pattillo, they should remember that excess industrial interrupted is not firm, and therefore does not come into a demand calculation. So, that is slightly different than the figure set forth on my Exhibit C, though I believe it is segregated there.

Q. Yes, it is segretated.

MR. McDONALD: Yes, it is segregated. So, on that basis, the fixed capital cost for 1958 as forecast in this statement of ours, which is what is available to us at the moment, is 37.67¢. That is what it cost us in 1958 to deliver gas on a fixed capital charge basis to British Columbia. To that you must add the other costs, the commodity costs which are common to all carriers -- 7.65¢. So, in 1958 every MCF of gas which we deliver to the British Columbia customers is costing us 45¢. If you look at the contract you will find that the maximum price we can charge under the worst circumstances to any British Columbia customer is 45¢. That is the fixed charge in the tariff, but I am not sure it is referred to. So, we are not going to get that because they do not have the contract demand; they are operating on a pay-as-you-go basis, or take-as-you-go basis, and the average price is going to be much



less than 45¢. It depends on your ability to sell interruptible gas within the demand valley, and as to what our average price will be; I think they will do very well out of it.

Q. Do you know a Mr. Wright who was with Sunray at one time?

MR. McDONALD: C.H. Wright, the chairman of the Board of Sunray Oil Corporation?

Q. Yes.

MR. McDONALD: I do very well; I know him.

Q. Do you know Mr. Adams?

MR. McDONALD: There is a Mr. Adams -- if you are referring to the Mr. Adams familiarly known as "Boots" Adams of the Phillips Petroleum Company.

Q. Yes.

MR. McDONALD: Yes, I know him.

Q. Were you with Mr. McMahon at a meeting in the United States where Mr. Wright, Mr. Adams and Mr. Fish were present?

MR. McDONALD: I certainly was.

Q. Did Mr. Fish tell Mr. McMahon in your presence that all he was going to pay for the gas that came from Canada was 22¢, and he insisted on a 25 per cent interest in the company?

MR. McDONALD: There was a great deal of conversation. Any time you meet Mr. Fish there is a great deal of conversation.



Q. Well, did it end up finally, that was it -- take it or leave it?

MR. McDONALD: No, I don't think it ever got to a take it or leave it basis. There was a desire on the part of Mr. Fish to gain not 25 per cent, but 50 per cent of Westcoast. The net result of all of the conferences was that we would continue negotiations in New York on the general understanding that the price would be related to 22¢ and we would give consideration to the 25¢ situation -- the 25 per cent share interest.

Q. Share interest.

MR. McDONALD: Yes. Mr. Fish was still hanging out at that point for 50 per cent; at least that was his ambition.

Q. So he was insisting on two things: a price no more than 22¢, and a share interest; and the two things were coupled together?

MR. McDONALD: Yes, they were coupled together in his mind, but they were not in my mind as a director of Westcoast, for this reason, Mr. Pattillo: I might as well give you the story: We were going to sell something in the neighbourhood of 3 million shares to the public, and it didn't make any difference to me, as a director of Westcoast, whether Mr. Fish's money bought it or somebody else's money bought it. So, what we were doing in the end, if Mr. Fish wishes to buy -- Pacific Northwest Corporation



wishes to buy roughly one million shares of stock at the going rate, he didn't know what they were going to pay for it: he didn't know whether he was going to pay \$5 million, \$6 million or \$10 million for it. So, we took the precaution of giving him ten days in which to raise the money; he had to notify us ten days up to the offer as to whether he was going to pay and, if he didn't, we would offer them to the general public, and somebody else would buy them. Now, that is all the sale of shares of Pacific Northwest amounts to.

Q. Was this the situation, that Mr. McMahon and you and Mr. Hetherington found yourselves after June, for some reason -- June, 1954 -- for some reason the F.P.C. had turned you down and granted Mr. Fish's application?

MR. McDONALD: That is right.

Q. You people at that time had spent a substantial amount of money?

MR. McDONALD: That is true..

Q. Pacific Petroleums is the promoter of the company which had spent a lot of money?

MR. McDONALD: Yes, they had controlled a lot of gas wells.

Q. And unless there was a line or some way of getting the gas out of the ground from the Peace River district, they had substantial investment tied up in the ground?



MR. McDONALD: Oh, no doubt about that.

Q. Yes. You then -- the three of you then went to California to try and interest the people there in buying your gas?

MR. McDONALD: That is right.

Q. And after some calculations there you could not get to a satisfactory price that they were prepared to pay and that you felt you could afford to accept?

MR. McDONALD: That is right.

Q. And then you came into conference with Fish, the man you had been fighting all these years for Pacific Northwest?

MR. McDONALD: No, Mr. Fish came into conference with us, and I will tell you why.

Q. He didn't have the gas, did he?

MR. McDONALD: That is not so. At least, the Federal Power Commission in the United States, which is far more capable than anybody in this room of deciding who is to have the gas, decided he had it, but I filed an appeal to the Third Surrogate Court of Appeals in Philadelphia, and Mr. Fish had to come back and deal with me because he could not proceed; he could not finance his project as long as West-coast Incorporated had their position in the courts. That is why he came up to see us to see if there was not a chance of an economic arrangement being worked out whereby this great market in the western



part of the United States could be served. By this time, Mr. Pattillo, we have learned a great deal more about the gas business than Mr. McMahon and Mr. Hetherington and myself knew in 1952. We had taken a good course in Washington and with the other financial people in the United States.

Q. With the Texans, and you took the final course in the negotiations with Mr. Fish. Isn't it fair to say that the three of you were seeking to get more than 22¢ at the American border?

MR. McDONALD: Yes.

Q. And that you considered you needed more to make your whole project worthwhile?

MR. McDONALD: Yes, I would have liked to have had more. It would have been a much easier proposal to handle all the way around. For instance, if we got 24¢ it might have been a great difference, but there was no way. In the face of an offer of only 20¢ for gas from the border I was going to take a real good hard look at 22, because my only other alternatives were 20 and 5¢ in your field for the gas for the next 20 years -- that was what they told me. That is not the deal I came back with about the 22. This was real hard work and we did our best.

Q. I am not suggesting for one moment that you did not. The only thing, as I see it, is that as the end result of the bargaining position that Mr. Fish had, and the whole thing being what it



was as just detailed by you, you had to make the best deal you could make, and you made it?

MR. McDONALD: Mr. Fish had a good bargaining position. He was -- I don't know how to play chess, but we moved our counter to him, and then we were put on even grounds and could sit down to see what was the economic basis for this proposal, in view of the fact that the policy of the Government of the United States, as enunciated by the F.P.C., was that they would not permit a substantial portion of the consumers of the United States to be committed for their gas supply to a source of supply outside of the control of the United States authorities. That is the policy we have met and I could not quarrel with it. We realized we could not quarrel with that policy, so we had to meet it. We had to assume Pacific Northwest was going to be built from the San Juan basin to Seattle, because that was the policy adopted after due consideration by the Government of the United States, and we were not going to fight that. So, it was to deal with this on a sound, economic basis, and our final judgment was that the 22¢ price got us into business.



Q. When you got the 22¢ price then you found that you were no longer going to be in a position to pay the prices which you had previously contemplated paying to the Canadian producers?

MR. McDONALD: Now, let me tell you about that.

Q. Well, is that correct?

MR. McDONALD: That is not correct for this reason: that the proposal that we made to serve Seattle, Portland and the general area on the Coast was based on a 5¢ contract and the original contract was based on paying 5¢ and not 6¢, as we are paying today. It was to be 5¢ for 5 years based on a quicker acceleration after 5 years up to 14, but the volumes are so small it is not a comparable situation. This is much better for the producer because the producer can make much more under this contract than he could possibly make under the original contract. I do not want it to be left in the minds of the people who have been thinking of this that this is a worse deal from that standpoint. It is a better deal for Canada, it is a better deal for the producer, and it is a better deal for the Westcoast shareholders than the original proposal.

Q. I am not quarrelling with the statement that it enabled the line to be built and that it is an advantage to the country; and I am not quarrelling with the fact that you could have made



a better deal. I am assuming you made the best deal that you could. But do you not agree with me in the light of the daily situation, as it is developing, and as you anticipated it would develop, that a fair deal would have been a contract with Pacific Northwest which had an escalation clause?

MR. McDONALD: I think it would have been, Mr. Pattillo, and I agree with you 100 per cent, but I would like to explain to you the difficulty we were under in 1955. We had an Act on the statutes of Canada, the old Electricity and Fluid Exportation Act which provided that a license could be issued just for one year. We were unable to get an Order in Council to give us a license that was an extended period after that, and in the face of the statute it was very difficult for anybody in the United States to think they were going to get their gas for that year. These facts were used in opposition against us in proceedings before the Federal Power Commission. Then, we had an Act in Alberta, which has now been revised, that prohibited the export of gas, if for any reason they decided they did not want it to go out of the country. That was the term of the permit. These were situations that created a state of mind in the United States that we would not be able to supply the gas and there were even pamphlets issued by our opponents. So, we were up against a real problem and in the making of our contracts we had to



meet that very type of opposition. We had to say, "We are going to give you this gas at a fixed price for a certain fixed term of time". If the people were going to invest their money and expect this gas to be delivered, they wanted to know they were going to get it.

We then came back to Canada and a new Act was passed, an Act to Regulate the Exportation of Power and Fluids and the Gas Resources Preservation Act of Alberta was changed to rectify these stumbling blocks. At the time I entered into the making of these contracts, we had not yet done those things. They were done after and it was on the basis that we could negotiate this contract that we did prevail upon the authorities and the Legislature, in each case, to put us in a position where we could make this agreement. Under this agreement we were not in a position to bargain and we had to look to our own economics to support the increase in prices. We just had to say, "We have the gas and we will deliver it."

Q. Would you be in a position to bargain for this escalation clause today?

MR. McDONALD: We are in business. That is all; we are in business; we have the gas, we have the pipeline and we are in quite a different situation.

THE CHAIRMAN: Gentlemen, we will have a ten-minute break.



---Short recess.

THE CHAIRMAN: Gentlemen, we shall now resume the hearing. Mr. Pattillo?

MR. PATTILLO: Q. Mr. McDonald, I just want to go back, if I may, to this transmission cost once more. Now, I am looking at the manner in which the utilities, in their brief, worked out transmission costs, and I would like, if we could, to translate your actual figures to this same method of doing it. Total capital cost of the line, as I understand it from your figures, is approximately \$157 million.

MR. McDONALD: Pardon me, Mr. Pattillo, until I have -- your statement is that the cost of the line was \$157 million? In other words, you were taking the \$170 million invested and taking off the plant?

Q. Yes.

MR. McDONALD: Well, you can't -- it is not proper to deal with the figures I gave you on that basis. It is inclusive here.

Q. All right, let us take the figure of \$179 million.

MR. McDONALD: Yes.

Q. Now, the operating costs for 1958 will be \$20,098,000?

MR. McDONALD: That is correct.

Q. The interest and amortization charges will be \$7,654,000?



MR. McDONALD: My figure is \$7,52,000.

Q. Yes, but then you amortized some of your financing expense?

MR. McDONALD: Oh, yes, that is right.

Q. So that is \$7,654,000, making a total of \$27,752,000?

MR. McDONALD: Yes, I think that is correct.

Q. Then income taxes, \$454,000. Do you take those into consideration?

MR. McDONALD: No, sir. Your question is what was the cost. You didn't ask me what the cost of service was.

Q. Right.

MR. FRAWLEY: Might I interrupt, Mr. Pattillo? I was not quite following that. Which income taxes did Mr. McDonald say were a cost?

MR. PATTILLO: He said they would not go into the cost of determining transmission; that is the second item from the bottom of the page.

MR. FRAWLEY: Net income?

MR. McDONALD: There is a provision for deferred income taxes of \$454,000.

MR. FRAWLEY: And what do you say about those?

MR. McDONALD: Well, that does not come into the cost allocation I have made here. This is a net cost I am talking about.



MR. PATTILLO: Q. What return do you figure in? Seven and one-half per cent on your ---

MR. McDONALD: No, sir; this is the first year of operation. We are very fortunate to exceed costs in the first year of operation.

Q. So you do not figure any return in at all?

MR. McDONALD: No. The interest, of course, which is part of the return, is included -- the major part of the return is included.

Q. Now, the daily capacity is 450 million?

MR. McDONALD: Yes, that is for the purpose of fixing the demand cost.

Q. And the annual sales volume would be ---

MR. McDONALD: The annual sales would be 96,581,000,000 cubic feet.

Q. That is, in fact, what they will be?

MR. McDONALD: Those are the firm sales.

Q. If the line was working at full capacity, what would they be?

MR. McDONALD: It would be 450 million at about a 90 per cent load factor, I presume; say 85 per cent load factor.

I will give you that in just a moment, Mr. Pattillo.



Q. Thank you.

MR. McDONALD: That would be about 140 billion cubic feet of annual sales per year.

Q. And they are going to be roughly 90 per cent?

MR. McDONALD: No, the annual sales -- the sales I used for 1960 are 133 billion cubic feet -- no, 123 billion cubic feet, because those are the firm sales.

Q. That is 123 as opposed to 140?

MR. McDONALD: That's right.

Q. And what is that percentage?

MR. McDONALD: That is on the basis of 450 million feet capacity.

Q. What percentage ---

MR. McDONALD: 88 per cent.

Q. The 123 is 88 per cent?

MR. McDONALD: Of 140.

Q. Right. Now, we cannot very well compare 1958 figure with 1960 figures, can we?

MR. McDONALD: No.

Q. We will have to go through 1958 first and then we can do 1960. Now, let us do 1958. We would still have the same potential of the line, 140, wouldn't we?

MR. McDONALD: In annual volumes, that's right.

Q. Your actual annual volume anticipated



for this year is how much?

MR. McDONALD: 96,581,000,000.

Q. What percentage is that?

MR. McDONALD: The percentage of 96 to 140?

A. Yes.

MR. McDONALD: 68 per cent.

Q. 68 per cent?

MR. McDONALD: Yes.

Q. All right. Now, our total annual costs are \$27 million ---

MR. McDONALD: 752,000.

Q. \$27,752,000, and our load factor is 68 per cent?

MR. McDONALD: 68 per cent.

Q. Now that we have got to those figures will you just make the calculation as to the annual cost per Mcf per 100 miles on that 68 per cent load factor?

MR. McDONALD: I am unable to do it, Mr. Pattillo, because I have \$4 million of a revenue from the gas scrubbing plant which has nothing to do with transporting gas, which should be deducted from that. I think it is \$4 million, if I am right in my revenue figure.

Q. But they have not gone into -- that is what I was trying to get at. As I understand it, of your operating expenses which we have



just been discussing of \$27 million, \$1,500,000 odd was the operating expense of the plant.

MR. McDONALD: That is the actual bodies that work in it; but it does not include the cost of the purchase of the project nor the amortization or taxes or interest.

Q. But that does not go into the operating expenses, does it?

MR. McDONALD: It goes into the \$27 million. That is the only point I want to make.

Q. Other than the \$1,500,000, where does it go?

MR. McDONALD: The gas scrubbing plant has nothing to do with the cost of transmission.

Q. I accept that, but of your operating expenses shown in Exhibit C totalling \$20,098,000, other than the figure of \$1,500,000, included in the figure of \$2,815,000 there is nothing in there relating to the scrubbing plant, is there?

MR. McDONALD: Certainly.

Q. What is it?

MR. McDONALD: Depreciation.

Q. All right.

MR. McDONALD: Taxes.

Q. All right.

MR. McDONALD: Interest; those are the real big items.



Q. Then let us try and get those out. What did you say this morning were the total operating expenses of this \$27 million that could be allocated, in your opinion, to the pipeline itself?

MR. McDONALD: If I could just look at my figures, Mr. Pattillo.

Q. Fine. Take your time.

MR. McDONALD: \$22,597,000.

Q. \$22,597,000. Now, those are the total annual costs. Now I want to know what is the cost of transmission for the year 1958 on this 60-some per cent load factor per Mcf per 100 miles.

MR. McDONALD: Mr. Hetherington points out that the \$22,597,000 which I used here still does not include some plant costs. If you really want to have the plant taken out, Mr. Pattillo, the engineers would have to sit down and do it.

Q. Well, I am prepared for you to revise it later. Let us deal with these figures at the moment.

MR. McDONALD: All right, but we will proceed on the basis that \$22,597,000 is the cost.

Q. Right.

MR. McDONALD: Your load factor is 68 per cent?

Q. The load factor is 68 per cent.

MR. McDONALD: Now, what do you want to



find out?

Q. I want to know what is the annual cost per Mcf per 100 miles.

MR. McDONALD: The amount of pipe installed in 1958 is 823 miles.

Q. Yes?

MR. McDONALD: Now, another complication, Mr. Pattillo, is that you have the cost of the gas in your \$22,597,000, which does not enter into the cost of transportation itself.

I know your problem, Mr. Pattillo, and I am sure the engineers could let you have that at two o'clock. I think that would be more convenient.

Q. All right. That is fair. You see the approach I have in mind?

MR. McDONALD: Yes, I see your approach.

Q. Now, Mr. McDonald, would you just look at the bottom of page 65 of your brief.

MR. McDONALD: Yes?

Q. You say, in the last paragraph:

"In describing the Westcoast
"project it has been shown that the
"delivery of Peace River gas to the
"Vancouver area at economic prices
"is made possible by the transportation
"of the large volumes of gas required
"for the export market served by the



"Westcoast system. There would
"appear to be no question that, as
"from time to time in the future,
"large volumes of gas are transported
"to export markets, the pipeline
"carrying such gas will at the same
"time supply Canadian consumers en
"route with gas at costs much lower
"than if the smaller Canadian market
"were to be satisfied from the same
"sources of supply."

Now, am I correct in thinking that you told us this morning that the prices that your company required B. C. Electric and Inland to pay are based on the proportion of the line which must be set aside for their use, even though it is not being so used at the present time?

MR. McDONALD: That is correct.

Q. Now, if that is so, as they take up and use more and more of that space, don't you get to the position that ultimately the price should be going down and that when they are taking all of the space that is set aside for them, then their price should be comparable to the price being charged to the United States company on a 90 per cent load factor?

MR. McDONALD: The only way to answer that would be, say, ten years from now, to take



a look at what the costs are. For instance, the costs will change, the price of gas is going up all the time, and the question is whether the company is making an adequate return; a great many things enter into it.

I would not say, offhand, that that is so, but we have taken that gamble, the shareholders of Westcoast have taken that gamble, that the costs are going to go up. They can go up as well as down, and we have fixed our limit, whether they will go down or not.

Q. The only way your costs will go up in the next ten years is if you have to pay additional prices for additional volumes of gas.

MR. McDONALD: That is right.

Q. Actually, your costs of running the line itself will go down as your interest charges decrease.

MR. McDONALD: Yes, but we must be compensated for carrying this line that is not used all the time.



Q. Well, now, will you tell me, from your B. C. Electric contract what will be the price for gas in ten years' time, and we know, of course, there will be no change in the price to Pacific Northwest.

MR. McDONALD: Are you referring to the contracts now in existence?

Q. Yes.

MR. McDONALD: They speak for themselves. The price will be exactly the same ten years from now as it is today.

Q. So that it does not make any difference, so far as the price is concerned, whether B. C. is using to capacity its proportion of the line or whether it is only using the small proportion that, in fact, it is using today?

MR. McDONALD: It makes a big difference to ---

Q. You people?

MR. McDONALD: The shareholders of West-coast, I can assure you.

Q. Of course, we agree. In other words, as the capacity to the Canadian buyer goes up and he takes his share of the line you have allocated to him, the profits that you will make will go up and that will mean that the contribution to that increase will be made by the Canadian consumer and no part of which will be contributed



by the U. S. consumer.

MR. McDONALD: I do not know that I agree with that entirely but we will be in a much better position, the earnings of the company will be in a much better position when we sell 150 million cubic feet in British Columbia than when we are only selling the present 30 million cubic feet. When you realize the present sales to British Columbia are less than cost you will understand that we are hoping that we can look forward to some time in the future to doing a little better than the actual cost and that arises out of the fact that we have built a pipeline on what we think is a most economic basis of providing these services ahead of the market.

Q. I am not quarrelling with your right to have a profit from the Canadian consumer. What I am quarrelling about is why should the whole increase of that profit in the years ahead put on the Canadian consumer?

MR. McDONALD: That is not the case. The Canadian consumer pays his just proportion of whatever the cost of serving him is. Mr. Pattillo, you seem to lack what this paragraph that I referred to means. This simply means that Canadian gas can be sold in Winnipeg at a much better price through the Trans-Canada line going through Canada than if you built a pipeline from Alberta to Winnipeg.



Q. Correct.

MR. McDONALD: If Winnipeg is using 130 million cubic feet which, I understand, is the present market, you cannot build a pipeline. That is what I am talking about. You cannot, possibly, build a pipeline from the Peace River area to Vancouver for 130 million feet. It just could not be done.

Q. I understand that and everybody here understands that and I also understand your statement where you say in the brief about the \$2. It would be extraordinarily expensive, it would not be economically possible but once you have the line, once the investors have come in, once they see that the line is economically possible and put the money up to build it, can you tell me then why over a 20-year operation of the line the Canadian consumer should be contributing the real profits?

MR. McDONALD: He is not contributing the real profits; he is contributing whatever is his fair percentage of the profit for the capacity used for his services. That is all he is expected to do and that is all he will contribute under our proposal.

Q. Let us put it like this so I can point out in a few words exactly what I am talking about. If the demand in British Columbia had



been such that everybody out there wanted to immediately get gas so the quantities set aside for them were now going through the line in the same proportion as is now going over to the United States which you say is, approximately, 90 per cent of the load factor, the revenue to Westcoast would be way up and all the increase of those revenues, from what they are today, would be contributed by the Canadian consumer because it does not make one bit of difference if he should buy more and more gas; you are charging for the space he had in the line whether he uses it or not. Is that not so?

MR. McDONALD: No, it does not work out quite that way. I think I see your problem and I would like to answer it. If the British Columbia consumer was today capable of buying 150 million cubic feet of gas and that was all available at the cost that we are now paying for this investment, his price would be, including the profit, the rate that is presently in his contract. But that would be very close to the present rate. That is not the case. So, instead of making what is a fair rate of return in 1958, we made just a trifle over 4 per cent; instead of making our 8 per cent, $7\frac{1}{2}$ per cent or 8 per cent, which a venture of this kind should make, we are only making 4 per cent.

In 1959, we do a little better.

In 1960, we do a little better but we do



not get up to the standard rate of return for some years; a good many years.

Q. In what year do you say you get to the standard rate of return?

MR. McDONALD: Possibly in the fifth or sixth year of operation. I mean on the forecast that we have.

Q. Yes. I am putting it to you, for the remaining fourteen years of the line on which all of the calculations are made, is not the Canadian consumer then paying for his proportion of the line, the space in it, a much higher price than the U.S. consumer?

MR. McDONALD: He is paying his due proportion.

Q. Well, now, I cannot follow that. I am sorry. I do not understand that when, as I understood yesterday, the demand factor in the 22 cents was \$1.09 on a 90 per cent load factor. In the fifth or sixth year you anticipate the Canadian markets are going to bring up their load.

MR. McDONALD: Well, Mr. Pattillo, I am glad you mentioned that \$1.09 demand and the 18-cent commodity charge on the Pacific Northwest. I omitted, yesterday, to elaborate on that. That is an arbitrary figure that is based on negotiations of what is best, in my judgment, of what commodity rate we should charge. You understand that anybody who



buys gas at a commodity rate of, say, 20 cents, which is the rate that B. C. Electric buys gas at, they can immediately go and sell it for 21 cents and they are not out any money. If you work out the demand commodity basis on the Pacific Northwest contract by the standard method of working it out, it would be considerably higher than \$1.095 but, on the other hand, the commodity rate would be down to as low as 14 cents, which would mean that Pacific Northwest industrial gas would be 15 cents, 16 cents.

My own thought, after studying their market and after having a good look at the individual part of their total load involved, namely, 10 per cent -- that is between 90 per cent and 100 per cent -- I think I want to get 18 cents for that commodity rate on the 90 per cent basis. In other words, the difference between 270 million feet a day and 300 million feet a day, for that 30 million feet a day, if they elected to take it, I want to get my full 18 cents and not 14 cents.

My judgment might be wrong but I think, looking at the years ahead, that is the proper method of working it out because I do not want to start at \$1.09 because it does not work out on that basis.

Q. You started with 22 cents.

MR. McDONALD: The \$1.09 plus 18 cents



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does not make 12 cents.

Q. If it is good enough for you why is it not good enough for me?

MR. McDONALD: When you get into the mathematics of rates you will find this is not a precise way of doing it.

Q. Coming back to this question that I asked you, at the end of the sixth year why does not the price come down to the British Columbia consumer, to an area in line with the price that you are getting then from the U.S. consumer, what is going to be the difference at that stage?

MR. McDONALD: The difference is, twice as much gas is sold to the United States as in Canada. That is one difference.

. Yes, right.

MR. McDONALD: It is the major difference and there is also a difference in the load factor; a considerable difference in the load factor.

Q. When this thermal plant is operating, and everything, will there be a difference in the load?

MR. McDONALD: Yes, because the thermal plant has load factor gas and having got load factor gas, it is based on firm gas so it is not going to change one iota. It is when you have firm gas with interruptible gas that you are going to have an interrupted load factor. In other



words, they are going to fill their quotas.

Q. If they increased the amount of firm gas they have in relation to the total amount of gas they have, do they not increase their load factor?

MR. McDONALD: Not if what they purchase is firm gas. They increase their peak. It depends on the load factor of the added volume. I anticipate, from what I understand, they are going to operate on a 75 per cent load factor on the thermal plant agreement. If the 75 per cent load factor is better than what otherwise was the operating load factor, they are going to improve in their situation; if not, they are going to be in a different situation. Those are future needs.

Q. I know, but we are looking now, and this is the only look we are going to have at this thing in the next twenty years as this is all based on a 20-year operation, now, I am suggesting to you, after the sixth year there is going to be no real difference between the Canadian consumer on your line and the U.S. consumer except one is buying greater quantities.

MR. McDONALD: I am not able to agree with you, Mr. Pattillo. I want to do the best I can for you, but I cannot think of anything that ---

Q. I want to go as far as I can with



you, Mr. McDonald, because the Commission has to consider this whole scheme and will be required to make a recommendation and if you can tell me whether or not differences are going to lie between the United States consumer and the B. C consumer at the end of the sixth year, I would be most anxious that you put it on the record.

MR. McDONALD: What you really want, Mr. Pattillo, is a consideration of the whole situation. But to give it in any particular year ---



Q. What I have in mind, and I will be very frank about it, is this clause 9 of the Regulations that are presently in force which reads -- it appears under Tab 4 in the green book:

"The price charged by a licensee for power
"or gas exported by him shall not be lower
"than the price at which power or gas,
"respectively, is supplied by him or his
"supplier in similar quantities and under
"similar conditions of sale for consump-
"tion in Canada."

Now, I have that very much in mind as to whether or not after the sixth year of operation it could be said that the company was not complying with that regulation.

MR. HETHERINGTON: Mr. Pattillo, let me answer that question, and possibly I can help the Commission with the views that I have regarding that situation. The gas that the British Columbia Electric Company and Inland have purchased from Westcoast is purchased neither in the same volume nor under the same terms and conditions of sale as the sale to the United States. The gas is not sold in the sixth year of operation. The gas was sold under a contract dated as of the date that we entered into the arrangement with the British Columbia Electric Company, and similarly with Inland. The contract must be treated by considering its term of 20 years, and not



by isolating one year and looking at it.

Q. Now, Mr. Hetherington, that is your view ---

MR. HETHERINGTON: Yes, and I have described this exhibit that was Exhibit No. 11 before the Oil and Gas Conservation Board given in March of 1955 ---

Q. Yes?

MR. HETHERINGTON: --- and at that time we described the contract with the American customer and with the Canadian customers, and we show the derivation of the 22¢ along the line I have outlined here, and I have adopted the text of the exhibit that was given back in 1955.

Q. Yes.

MR. HETHERINGTON: The gas was marketed in the United States in competition -- in strict competition -- with United States sources at the best price that we could get. The amount of gas that the British Columbia Electric Company ---

Q. Can I just ask you -- well, go ahead.

MR. HETHERINGTON: The amount of gas that the British Columbia Electric Company could buy at the time that they signed the contract was no particular amount that they were willing to guarantee, and Pacific Northwest signed up on a take-and-pay-for basis that would make the financing of the pipeline possible. British Columbia Electric Company



is not required to purchase any particular amount of gas. They are not required to pay for anything that they do not take. The terms of the sale are entirely different, and the terms of the sale are for a period of 20 years, and there is nothing about the sixth year or any other year.

The amount of gas that the British Columbia Electric Company estimated they were going to use in the sixth year, when they signed the contract, was approximately 140 million cubic feet a day. It would not finance the pipeline, and we could not get the British Columbia Electric Company -- as a matter of fact, we did not even ask them to sign up for any particular amount of gas because, in our opinion, they would need so much more gas than they were willing to sign up for, and we did not want to have a ridiculously low figure in the contract, anyway.

So, the point is that the price of gas was fixed for a 20-year period when we signed the contract that governs the terms of sale, and neither the volumes nor the terms of the sale were the same. The price of this gas in the United States was strictly competitive. When Mr. Kayser described the basis upon which this arrangement in the United States was made he pointed out to the Commission that he planned a line from near Boise, Idaho to San Francisco, and he was going to take 250 million



cubic feet per day of the total of 300 million cubic feet -- he was going to take that to San Francisco, and Pacific Northwest Pipelines Corporation had enough gas to look after their needs, but they thought they could sell another 50 million cubic feet per day, and we were before the Federal Power Commission on that basis -- based on those economics. When we got before the Federal Power Commission, as Mr. Kayser pointed out, the Pacific Gas and Electric Company decided that they -- as a matter of fact, they never would agree to the line from Boise, Idaho to San Francisco, anyway, and Mr. Kayser said that that was their business. They had reasons for it, but they would not go along so we were in the position of having a market for only 50 million cubic feet per day.

Mr. Kayser was very modest yesterday when he said to the Commission that he thought he had contributed something to the economics of this project. Mr. Pattillo pointed out that the producer had to give a little bit and the pipeline had to give a little bit, and he asked Mr. Kayser where he had given a little bit. I would like to tell the Commission where Mr. Kayser did give a large amount that made this Westcoast pipeline possible.

When the Pacific Gas and Electric Company refused to support our proposal to build this line from Boise, Idaho to San Francisco -- and, as I say,



they had good reason -- we were left without a market for Canadian gas. This was in the middle of the Federal Power Commission's hearings, and Mr. Kayser made an arrangement with Pacific Northwest which he described yesterday for the exchange of gas in which he paid 25¢ per MCF for gas delivered in Colorado. In order to take that gas he sold to Pacific Northwest on what they call an exchange arrangement -- he sold his own production in the San Juan basin for, I believe the price was, 12¢ per MCF. He sold 100 million cubic feet to Pacific Northwest at 12¢ -- that was his own gas -- and he bought back from us 100 million cubic feet per day for which he paid 25¢. So, those are the economic situations behind the sale of gas at 22¢, and Mr. Kayser is the one who made the sale possible by swapping 100 million cubic feet of gas which he sold at 12¢ with 100 million cubic feet of gas which he bought back from us at 25¢.

Now, having that contract along with the British Columbia Electric contract and the Inland contract made the Westcoast pipeline possible, and in order to make the arrangement with Pacific Northwest it had to be a long-term arrangement, so we signed a 20-year contract. The same thing is true with the British Columbia Electric Company and the Inland Natural Gas Company. The terms of those purchase agreements are not all the same. They are



not at the same volumes, and over the 20-year period they are not on the same terms and conditions in the overall, so I cannot answer the question by referring to the sixth year of operation, or the seventh, or any other year. The sale was made at the time that the contracts were signed, and in the overall the terms and conditions are different.

Q. Well, Mr. Hetherington, at the time in 1954 when these negotiations took place I assume that you had had a good many years' experience in the gas business?

MR. HETHERINGTON: Yes.

Q. You were fully aware that for a good many years no contracts were being entered into without escalation clauses in the gas business?

MR. HETHERINGTON: Well, that is generally true, yes.

Q. You are fully aware that the price of gas in San Francisco was steadily on the rise, and that you could anticipate there were going to be rises in the years ahead?

MR. HETHERINGTON: Yes.

Q. Well, let us not talk about this 34¢. It might have been 34¢ for that particular period -- that particular year -- but it is already up much above 34¢, is it not?

MR. HETHERINGTON: Yes.

Q. And if we were comparing the 22¢ --



if it is a fair basis of comparison -- with the 34¢ based on the price in California today at San Francisco what should you be getting at the American border?

MR. HETHERINGTON: Well, it would be substantially higher than it is in our present contract.

Q. How much?

MR. HETHERINGTON: Well, I do not know just exactly what the competitive price is. The Alberta and Southern people have introduced some exhibits that show that the price should be in the range of 29¢ in order to be competitive in San Francisco. Those are their figures.

Q. So that would be up already that far -- 7¢. Now, what I am pointing out, Mr. Hetherington, is this, that as the years go on and as the Canadian consumer takes his gas and fills up the line -- and all your economics of completing this line were predicated on the fact that they were going to do so, were they not?

MR. HETHERINGTON: Yes, sir.

Q. So, as long as you have this price for the Canadian consumer the increase in profits that you are going to make in the operation of the line is coming from him?

MR. HETHERINGTON: Well, I look at it differently from that.

Q. You tell me who else it comes from.



MR. HETHERINGTON: Yes, I will explain it.

Mr. McDonald pointed out that in 1958 we make barely over a 4 per cent return, so I look at it not as an increase in profits coming from the Canadian sources, and look at it in this way, that the contribution of Westcoast to the Canadian sources is decreasing as the market builds up to where we would be getting what would be considered a reasonable return, namely, 7 1/2 or 8 per cent.

Q. Well, I know, Mr. Hetherington, it all depends on which side of the table you are sitting when you are looking at these things.

MR. HETHERINGTON: Well, as long as we are making less than a 7 1/2 per cent return we are making -- we are selling the gas at less than we should, and as the Canadian market increases and we do get up to a 7 1/2 per cent return we will then have eliminated the contribution that we are making to the Canadian market.

Q. All right. Now, according to your figures when are you going to be there?

MR. HETHERINGTON: Well, Mr. McDonald said the fifth or sixth year, and that is on the basis of the projections here. If the market grows a little faster than that it could be sooner.

Q. We are right back then -- you agree with me that where the increase in profits over the years is going to come from is not from the American



consumer?

MR. HETHERINGTON: You cannot single out any one customer as being the customer that provides the profit. Both customers, United States and Canadian, furnish the revenue, and it all goes into the same till, so I cannot single out and say that the profit on the pipeline comes from the sale of gas in Canada just because the revenue happens to about match the amount of net operating income that we have.

Q. Well, will you agree with me on this, that you are not making 7 1/2 per cent today on your United States sales?

MR. HETHERINGTON: Well, yes -- I am not sure it is 7 1/2 per cent, but Mr. McDonald pointed out and gave the Commission the allocation of costs that showed that we were selling gas to the United States market at a price substantially in excess of our bare cost aliquot to that particular sale.

Q. The United States price is substantially less.

MR. HETHERINGTON: No, we are selling the gas to the United States market at a price higher than the aliquot cost to that market, so I do not know what the rate of return would be on the portion of the system that could be allocated to the United States, but it is something above cost.

Q. Yes. I would like you to make the



calculations out and show us in doing so your method of allocation, because I am satisfied that if you are only making a 4 1/2 per cent return today, and if, as Mr. McDonald says, you may not be quite making the cost at the moment, or just making the cost, on your Canadian sales, it follows that you cannot be making 7 1/2 per cent on your 90 per cent load factor from the United States, and never will.

MR. HETHERINGTON: Well, I will make that calculation.

Q. Thank you. Now, I would just like to deal for a few moments with the new proposal that is presently, as I understand it, before the Conservation Board, and, accordingly, I do not want to go into the merits of that at all; I merely want to ask some questions the answers to which I think the Commission needs to know. Is it your position that there is more than an adequate quantity of reserves to permit export permits to be granted to both your company and Alberta and Southern when you are both contemplating being in somewhat the same area?

MR. HETHERINGTON: We do not -- I do not recall asking this as a question, or are you asking it as part of our submission?

Q. No.

MR. HETHERINGTON: We do not even deal with Alberta and Southern.

Q. I know you do not, but you predicate



it all as if you were the only one in the picture. I am merely wanting to know: Do you say that there are adequate reserves, in your opinion, from the various fields that can be proved up that will permit both companies being in business at the same time?

MR. HETHERINGTON: This Table No. 1 that is included in our submission to the Conservation Board setting forth the available reserves in Alberta allocated to logical uses ---

Q. Yes?

MR. HETHERINGTON: --- shows that after taking care -- and I think I will read the figures because it is fairly important; it is also in the brief.

MR. McDONALD: Page 26.

MR. HETHERINGTON: Yes, on page 26. Turning to the last item on page 26, we estimate that the total reserves in Alberta -- proved reserves today -- are 22.3 trillion cubic feet, and we think that about 3.7 trillion of that is required to look after Canadian Western; 5.8 is required to look after Northwestern Utilities, and about 1.2 trillion for Medicine Hat, and two-tenths of a trillion for local areas. Then, there are about another two-tenths for the Peace River area -- that is about 11 trillion cubic feet which is required to look after local uses, and I believe that that figure is pretty well



in line with the evidence submitted by Dr. Govier of the Conservation Board, although these figures are arrived at independently.

Then, there is committed already to Trans-Canada 4.35 trillion, but we know Trans-Canada needs additional gas. We do not have their evidence, and I am sure it will be presented to this Commission, but my feeling is that they will probably need another 300 million feet -- maybe 350 million feet. They are going to ask for something like that, in which case they should have something in the order of 7 to 7 1/2 trillion set aside for them; let us say 7.1 trillion, which is the figure I have taken for Trans-Canada.

Westcoast, then, is authorized to export about 1.1 trillion cubic feet in the Montana and Saskatchewan Power area -- Montana is 294 billions, and Saskatchewan I have already included in the Medicine Hat area, so I will not include that a second time -- so that is about 8.5 trillion that is committed for export or required by Trans-Canada, and that gives a total of 19.6 trillion.

Then, there is eight-tenths of a trillion that is beyond economic reach, so that is 20.4 trillion, and it leaves something in the neighbourhood of 2 trillion cubic feet of proved reserves today that the Province can say is definitely surplus to the needs of the Province and to the needs of the



people of Canada.

That is our firm opinion that this is all the gas that is available at this time, but we know that the potential is very much greater in the future, and our plans in applying to the Board to export additional gas are geared to that thinking. We are asking for the amount of gas that is surplus today to the needs of the Province and to the needs of Canada and we feel that the Province of Alberta and Canada can rightly grant us that in accordance with the procedures that the authorities have used before in determining what gas can be exported.

Q. But if they did that to you there would not be any, as you say, for Alberta and Southern.

MR. HETHERINGTON: That is right. Even if we were not granted a permit at all, on our figures today and on everybody's figures, so far as has been before this Board, there is not enough gas that you can say is proved today. We have no doubt that down the line it is going to be available. Alberta and Southern, you will learn, requires a very large volume of gas since they must start from scratch, as it were, and build a new pipeline. We are not doing that. All we have to do is build a few miles of connections and we are in business on a



small scale or a large scale, and our feeling is that we could not ask Alberta for, and expect to get, any more than, say, this 1.3 trillion cubic feet -- maybe 1.5 trillion cubic feet -- at this time.

We recognize, of course, that the amount of gas that is going to be available in the future is very much larger, so we are proposing a pipeline that will take many times this volume of gas so that as additional volumes become available in the future we can come back to the Government of Alberta and the Government of Canada and ask for additional gas to fill up our system.

Q. Now, Mr. Hetherington, in your brief at page 3 -- or, Mr. McDonald -- there is a paragraph starting:

"In 1951 it was apparent to the management of Westcoast that the proper and reasonable method of supplying natural gas markets in Canada, other than British Columbia, was based upon allocating a supply of gas to meet Alberta's future requirements, and dedicating surplus reserves in Southern and Central Alberta to the markets which could economically be reached in Eastern Canada. At the same time Westcoast contended that the reserves of gas in the Peace River area of Northwestern



"Alberta and Northeastern British Columbia
"were ideally located to supply consumers
"in the interior of British Columbia and
"the Lower Mainland area, with a surplus
"available to supply part of the gas de-
"mands of the consumers in the Pacific
"Coastal States . . ."

That was your thinking in 1951?

MR. McDONALD: Yes, towards the end of 1951.

Q. That is not consistent with your new proposal, is it?

MR. McDONALD: Yes, it is, because ---

Q. Well, as I -- let me how I explain how I understand this. That was a geographical allocation; an allocation of the reserves of the Peace River district to the Western Coast; the allocation of another section to meet the situation for Alberta, and then the allocation of the reserves in the Southern region -- Southern and Central -- to the Eastern Canadian market. Now, are you not, under your present scheme, going right into that market?

MR. McDONALD: Yes. Let me explain. You will note that further on in the brief at page 6 I go back to what I think the policy now is. I do not think there is any question but that the proper policy in 1952 was to look at two things -- the geography plus the then proven reserves plus the fact



that to allocate the Southern Alberta gas to serve Vancouver via a line to the United States was not in the interests of Canada when there was a gas supply in Peace River which could go the same number of miles, or a less number of miles, to Vancouver, and which could serve to develop one of the really great geological areas of these Western Plains. That was our thinking. We thought there was plenty of gas available in Southern Alberta which should go where it could do the best for Canada, namely, the East, and we would go up North and pioneer the area and build the pipeline to Vancouver, which we have done.

Now, we have the situation today, or we have in Alberta reserves of gas far exceeding anything that anybody ever estimated in 1951. Our geologists, before the Conservation Board, estimated there would be 10 trillion cubic feet of reserves in Alberta by 1960, or some date along that line, and everybody laughed. Now we have 22 trillion cubic feet, and it is an entirely different situation.

The needs of Eastern Canada can be supplied from Southern Alberta, or from Alberta, and there is available gas in addition to that which can be economically marketed in the United States, and that is what we advocate, but it can only be marketed in those volumes which can be economically moved and which can be accepted by the purchaser and which can be used from time to time, subject in every



instance to a reconsideration of the whole pattern of export.

MR. PATTILLO: Well, I think, perhaps, this would be a good ---

THE CHAIRMAN: There is one question that I would like to ask Mr. Hetherington.

Assuming for a moment that B.C. Electric was prepared to purchase the same quantity, 300 million cubic feet, of gas, would you be prepared to give them a contract with the same terms as the contract with Pacific Northwest?

MR. HETHERINGTON: In the light of the situation as I know it today we would not be.

THE CHAIRMAN: Thank you.

We will now adjourn and reassemble at 2.00 o'clock.

---Whereon the hearing adjourned at 12.15 P.M.
until 2.00 P.M.



---On resuming at 2.03 P.M.

THE CHAIRMAN: Gentlemen, we will now resume the hearing. Mr. Pattillo?

MR. PATTILLO: May I apologise, Mr. Chairman, for being late.

THE CHAIRMAN: Your apology is accepted.

MR. PATTILLO: Q. I still want to spend a few moments dealing with this new project, and would you look at the map in the brief at page 54.

MR. HETHERINGTON: Mr. Pattillo, I wonder if I might ask the Chairman's clarification of the question that he asked me just before lunch? The question actually could have been, after thinking it over, interpreted in one of two ways, and I might have interpreted his question incorrectly.

MR. PATTILLO: I think the best thing to do is to have the question read back together with the answer you gave, and you can ask anything that you require.

THE REPORTER: "THE CHAIRMAN: Assuming
"for a moment that B.C. Electric was pre-
"pared to purchase the same quantity, 300
"million cubic feet, of gas, would you
"be prepared to give them a contract
"with the same terms as the contract with
"Pacific Northwest?

"MR. HETHERINGTON: In the light of the



"situation as I know it today we would
"not be."

MR. HETHERINGTON: Yes, my interpretation of your question was if B.C. Electric could now purchase 300 million cubic feet a day would we sell them at the same price and on the terms of the existing contract that we have with Pacific Northwest for 300 million cubic feet per day, and my answer was predicated on that interpretation of the question. We now know that we cannot buy additional quantities of gas, or, we could not buy 300 million feet a day, at least, at the present prevailing prices. The cost of our project is considerably more than it was originally anticipated. The gas we need is remote or is outlying from the original quantities of gas, so additional gathering facilities would be required, and we would also have to add considerable compression equipment to the pipeline which at today's cost would make it impractical for us to be able to sell another 300 million cubic feet on the same terms and conditions that we sold the first 300 million cubic feet, whether it was for B.C. Electric, or for anybody else.

THE CHAIRMAN: Yes, I can understand that, but, on the other hand, suppose 300 million cubic feet were diverted to British Columbia and you were asked to sell that gas on the same terms as your existing contract for export; would you be prepared



to do so?

MR. HETHERINGTON: Well, if it were the 300 million feet that we are now selling to the United States, it would not make any difference insofar as revenue goes. In principle, of course, it makes some difference, but so far as revenue goes we can divert the present 300 million cubic feet from the United States to Canada without affecting our revenue position.

THE CHAIRMAN: Yes, but is it not a fact -- I am not trying to lead you down the garden path, but is it not a fact that it would not be a profitable contract?

MR. HETHERINGTON: That is exactly what I mean. We could not afford to do it.

THE CHAIRMAN: Thank you.

MR. PATTILLO: Q. Looking at the map on page 54 you show a blue line running from Coleman to Savanna Creek field.

MR. McDONALD: Yes, Mr. Pattillo.

Q. Mr. McDonald, in your position with Westcoast, how much money has El Paso or its associates loaned the producers in the Savanna Creek field to try and develop this project -- either loaned or agreed to loan?

MR. McDONALD: I just do not know whether I can answer the question, Mr. Pattillo. The producers are Phillips Petroleum, Canadian Husky, and



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Northern Natural Gas; those are the three main partners.

Q. And Anaconda Petroleum?

MR. McDONALD: Yes, that is one of the very minor companies -- a very small percentage. There are three or four small percentages, but they do not enter into the picture.



Q. I understand that El Paso has agreed to loan or has loaned up to \$5 million to the producers of this field. Do you know whether that is so or not?

MR. McDONALD: No, I couldn't give you evidence on that point, Mr. Pattillo. That would be something between El Paso and whatever company they loaned the money to. I can't see loaning money to Phillips and Northern, but they may have loaned money to Canadian Husky and I have heard that that is the case, but I am not in a position to give you the details.

Q. Did Mr. Kayser tell you how much they had loaned to Canadian Husky?

MR. McDONALD: No.

Q. Did he tell you they had loaned money to Anaconda Petroleum?

MR. McDONALD: No, I never heard of that at all.

Q. Did you read about it in the newspapers?

MR. McDONALD: I don't recollect, for the moment, ever reading anything in the newspapers about it. It possibly -- if you are referring to Husky, there was some mention of it in connection with Husky, but all I know was what was in the newspapers and, for the moment, I didn't recollect that. It seems to me, now you mention it, there



was a squib in the Calgary papers reporting Canadian Husky's annual statement, but I could not give you the details on it.

Q. Mr. McDonald, why are you shifting your operations to Southern Alberta rather than developing the Peace River field for the additional supplies of gas required by El Paso?

MR. McDONALD: Well, we are not shifting our operations at all, Mr. Pattillo. If you read the brief, you will find we had a contract subject to negotiation and final completion to deliver 250 million feet a day to the Pacific Northwest at Sumas. But that, of course, is not all the gas they require. They require another 150 million feet a day and that is the purpose of the Southern Alberta operation, to supply the additional 150 million feet.

Q. Would there be any problem about getting that 150 million feet from the Peace River district if you could make a deal with the producers up there who presently have reserves which have not been fully developed?

MR. McDONALD: I think the 250 million feet that we foresee that can be developed at Sumas, or Huntingdon, is all that the present productive capacity or exploration programs between now and the 1st of November, 1960, can produce. That is a lot of gas, Mr. Pattillo, and I think that



is a reasonable forecast of what can be developed in the ordinary course of development.

Q. Ever since your price has been known up in the Peace River area for the producers, there has been no drilling carried on except to the extent of maintaining their leases in good standing, isn't that so?

MR. McDONALD: That is completely wrong, Mr. Pattillo. The reservations or the permits in British Columbia require continuous operations. The people that contracted their gas to us, such as Phillips Petroleum and the White and Lloyd group, have continued with their wells and have developed the area and, in addition, there is considerable exploration going on.

Imperial Oil is spending millions of dollars up there; Sinclair Oil, the Sinclair Oil Company is spending millions of dollars, Pacific Petroleum groups properties, not connected with gas at all; that is a straight development program.

Q. Am I correct in thinking, in dealing with Peace River, that these gathering lines of yours, that the project of the gathering lines has been much changed in recent years and the lines are going out rather than requiring the producer to bring the gas to a central point, and that is one of the ways you are avoiding this favoured nation clause?



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MR. McDONALD: Oh, that is ridiculous, from my viewpoint, Mr. Pattillo. We always had one program. We will pick up the gas in a central point in each field and our forecasted gathering system, as I have indicated in the red booklet, the red booklet that was left with the Commission is the forecast, and you will notice them going to each of the fields.

It is not -- we have not changed that program one iota.

Q. So you say the new project is in no way related to trying to keep inviolate the 22-cent contract and, at the same time, try to avoid the restrictions it puts upon you?

MR. McDONALD: No connection with it. We want to get gas in volumes, as much as we can, and sell that to anybody we can sell it to.

Q. But you do agree that in making this new deal you first had higher prices with escalations and finally had an amended arrangement whereby you were to get your costs plus a fair mark-up of $7\frac{1}{2}$ per cent?

MR. McDONALD: That was in the Southern Alberta transaction, yes, that is so.

Let me explain, Mr. Pattillo, that the original contract was based on a sale of gas from the Savanna Creek field, which is only 24 miles inside Alberta with only 100 miles of a line. That



is a very short distance to carry the gas in the large volume capacity, and the 25-cent price you referred to in the May 25th contract was related to the economics as of that date.

Subsequently we have changed the program and go all the way to Calgary and north of Calgary some 55 miles, and it is a different situation entirely and, therefore, we have a different price set-up.

Q. Having regard to the size of the line projected, is it not fair to say that to bring that line to full capacity you would have to keep moving up when new fields became available so you would ultimately have what I call a gas ring, right up to Peace River?

MR. McDONALD: No, no. I don't follow you, Mr. Patullo. I don't follow your thinking. Our Savanna Creek contract shows the price is related to volume that is carried through the pipeline. There are three stages of price, all of which is covered in the brief and, as the line goes into greater capacity and more is carried in the 30-inch line the producer price is increased, and that is related to a very limited area in Alberta, just north of Calgary to just south of the border, the favoured nations part of the contract.

Q. And this new contract, although those prices may be higher, there is no take-or-pay



in this one, is that so?

MR. McDONALD: Oh, yes, it is a take-or-pay for 150 million feet a day. It is exactly the same contract as at Sumas on a 90 per cent load factor.

Allow me to check. Yes, I am speaking from memory but I am sure of that.

Q. You say it is a take-or-pay?

MR. McDONALD: Oh, absolutely, yes.

Q. Now, Mr. Hetherington, may we get back to these transmission costs that have been worrying me. Have you got that calculation?

MR. HETHERINGTON: I found the calculation a little involved to do over the lunch hour and was not able to complete it in that time.

Q. I have here a chart which shows the effect of the annual load factor on the gas, on pipeline transportation of gas, which will be put in evidence later. I will not put this chart in now but it forms part of the brief of the Trans-Canada Pipe Lines, which had been delivered but which has not yet become part of the evidence and, according to this chart, they show a pipe line annual load factor of 100 per cent, in the size of pipe line which they have, which is larger than yours, at something under 2 cents, and when we get over to a load factor which would be a little less than 70 per cent they show (and



this is Mcf per 100 miles) the cost as being above $2\frac{1}{2}$ cents.

Then they show it increasing steadily until it passes 4 cents, when it is in the vicinity of 43 to 44 per cent load factor.

Now, assuming that that chart is correct, as based on engineering, as to what load factor is, and how much transmission costs are affected by it, and on the figure you gave us this morning of 68 per cent, would you agree with me that the cost would be, per 100 miles per Mcf, more than $2\frac{1}{2}$ cents?

MR. HETHERINGTON: The number read off this chart is a little more than $2\frac{1}{2}$ cents. Now, I am not familiar with this chart and I don't know what they mean by cost. It says, "Weighted average cost of transportation," and I presume that includes the rate of return that the people who prepared this chart want to include in their cost of service.

Q. Well, it was prepared by the Commonwealth Services Group and they undoubtedly will be giving evidence; but one of the things that interested me very much, Mr. Hetherington, and from your knowledge in the gas business you may enlighten me on, when I looked at what they had and compared it with what the Western Canadian Natural Gas Company Limited had, they both say when you are working out your costs you include your



income tax picture as part of the cost.

From your knowledge in the gas business would you say that is correct procedure and practice?

MR. HETHERINGTON: Yes. It is when you are talking about cost in terms of cost of service. We say that right in our brief, or the equivalent of that.

Q. They also include a rate of return rather than doing, as you were doing this morning, merely including your interest payments. Now, is that general practice in the gas business?

MR. HETHERINGTON: In using cost in the sense of cost of service, it is, yes.

The numbers that we were referring to here that Mr. McDonald referred to, were our actual out-of-pocket costs.

Q. Well, what I would like to have for the Commission is the calculation of the transmission costs in accordance with usual practice of those in the gas business, and I would also like to have your calculation and a memorandum showing the differences that you say should be taken into consideration.

Now, I was also interested in noting that when you are talking about weighted average that that apparently is a method of allocation as opposed to the method of allocation that you were developing this morning. From your experience in the gas



business, would you agree that that is so?

In other words, if you are transporting to the end of your line so many thousand cubic feet and then have so many thousand cubic feet going only part way, that you weight that in arriving at your costs?

MR. HETHERINGTON: Well, you can weight them.

Q. Is that usual practice in the United States?

MR. HETHERINGTON: Not necessarily.

Q. Well, now, what do you mean by "not necessarily"? Is it good practice?

MR. HETHERINGTON: Well, let me put it my way: I have had a considerable experience in cost allocations in the United States and one common method used by the Federal Power Commission is termed rolled-in rates, where everything is thrown into the same pot, divided by the total amount of the gas. The Michigan and Wisconsin Pipe Line is done on that basis and it does not matter whether it is a few miles in the field or right in Detroit or Green Bay, Wisconsin; everybody has the same price.

There is another method also used in the United States considerably and it has been followed by Trans-Canada here in that they have zone rates.

So to say it is usually practice, it is done both ways. The flat rate or rolled-in rate



theory is based on the idea that somebody closer to the field could not get gas if it were not for somebody farther away, so the fact that one is closer to the field does not necessarily mean anything and quite often it is decided that everybody on the pipeline should have the same rate.

On the other hand, some people maintain if you are closer to the field and the transportation costs are lower, you should get a lower rate, and that is the basis for a zone rate.

Q. Well, in this particular pipeline of yours there is not very much distance in mileage between the take-off point for Vancouver and the Sumas terminal, is there?

MR. HETHERINGTON: No, they are at the same physical location.

Q. And B. C. Electric is required to run its own facilities from there to the City of Vancouver?

MR. HETHERINGTON: Yes.

Q. So practically all of this gas in this system, with the exception of the smaller quantity of gas to Inland, comes right down through the whole system?

MR. HETHERINGTON: Yes.

Q. And you would probably agree with me that, under those circumstances, there should not be very much difficulty in arriving at, following



usual practice in the gas industry, what is a proper figure for Mcf for all of that gas?

MR. HETHERINGTON: Well, there is no particular problem in it.

Q. No. Now, can you tell me, from your experience in the gas business, where you have ever heard of the allocation that Mr. McDonald was putting forward this morning, where you allocate on the basis of the amount of space that you say is being reserved in the pipeline for these various producers, and do that on the basis of your total capacity line?

MR. HETHERINGTON: Yes, every allocation, practically every allocation that is made in the United States and is presented before the Federal Power Commission is done on the general basis used by Mr. McDonald. The costs related to the capacity of the line, or the demand costs, are allocated on the basis of the peak-day deliverability reserved for a particular market, and the costs that are available with throughput, such as the cost of the gas and the operation of the stations and items like that, the commodity costs, are allocated on the actual amount of gas used during the year.

That is a common allocation referred to as the demand-commodity allocation.

Q. And that is done where you have a situation such as here, where you build a pipeline,



as you say, made possible by the purchase of gas at the terminus by the U.S. company?

MR. HETHERINGTON: Well, it is done in very nearly all cases. As a matter of fact, the Federal Power Commission has certain decisions; the Colorado River Fuel case is the case ordinarily considered the pattern on demand-commodity matters, and there are a number of things in it which are quite arbitrary.

Instead of putting all the costs related to the capital investment in the plant, instead of putting all of those matters in, they arbitrarily split them 50-50 between demand and commodity, and there are various other methods used that are quite arbitrary.

It is common practice in the United States, where the Federal Power Commission does not control the rates of direct sales by the pipeline, let us say, to an industry, the Federal Power Commission listens to the evidence on how the cost of the pipeline and the cost of service should be allocated as between regulated sales and unregulated sales. Since the Federal Power Commission has no jurisdiction over the direct sales, some basis must be arrived at for excluding the costs of the facilities relating to the making of the direct sales so that the Federal Power Commission can inquire into the rate of return that the company makes on its regulated



business.

Mr. McDonald used the type of demand-commodity allocation customarily used by the Federal Power Commission in separating two types of service.

Q. Now, getting at this cost picture: are you aware of any person in your corporation, any officer, ever telling the British Columbia Electric that it was costing your company 25 cents to deliver gas at the take-off point, at the border?

MR. HETHERINGTON: I am trying to recall.

Q. Mr. McMahon talking to Mr. Grauer?

MR. HETHERINGTON: We had some discussions ---

Q. Now, just answer the question.

MR. HETHERINGTON: I will have to phrase it this way, because these discussions were in connection with the sale of additional gas to Mr. Grauer.

Q. Mr. Hetherington, I am quite content about that, but let us get this straight: I have been letting you make speeches right along because this is not a court of law; this is a Commission, and we are trying to help you and we are trying to get information to enable us to report to Canada; but please do not continue to do it, because my questions are simple and you should be able to give me a direct answer.

MR. HETHERINGTON: Well, I think I can give



you a direct answer. I don't recall using the term of "25 cents" or any other particular cents, but we can refer to this Exhibit C and, by taking our total revenue and dividing it by the total amount of gas sold, I think it will come out to something like 24 cents.

On the one hand, we have sales to the United States at 22 cents, plus the sale to Canada on the demand-commodity rate, and the average of that, without any allocations or anything, has turned out to be 24 or 25 cents, and that may possibly be the figure to which you refer, and I am sure, in our discussions with Mr. Grauer, we probably told him something like that. I don't recall specifically.

Q. Now, in this contract between B.C. Electric and yourselves regarding the thermal, that is a 75 per cent load factor, take-or-pay contract, is it not?

MR. HETHERINGTON: I believe it is.
Mr. McDonald, can you remember?

MR. McDONALD: Yes.

MR. HETHERINGTON: I think it is a 75 per cent take-or-pay contract.

Q. And that is at a price of 34 cents, is it not?

MR. HETHERINGTON: Well, it is on a demand rate of \$3.21 a month, plus a commodity rate of



20 cents per Mcf.

Q. Which works out at a price of 34 cents on the take-or-pay?

MR. HETHERINGTON: That is true.

Q. Why did you charge them the extra 2 cents? Why did you charge 34 cents instead of 32 cents?

MR. HETHERINGTON: I was going to finish my statement and explain that. The contract provides that the B.C. Electric Company must take this gas or pay for it at a 75 per cent load factor and I know -- I am trying to avoid hearsay, but I know, of my own knowledge, that the B.C. Electric intends to take the gas at a very much higher load factor and we specifically provided in the contract that the B.C. Electric can do anything it wants to with the gas available, within certain limitations.

In other words, they could take this gas that represents the gas on any one day between the contract demand and 75 per cent load factor and could sell to an industry, let us say, and they are going to take this gas which, if they buy it at 100 per cent load factor, costs them about 30.4 cents per Mcf and they will sell the Valley gas not used by the electric generating station to industry at 45 or 50 cents, quite a substantial mark-up and thereby reduce the cost of the gas they do burn in their thermal plant.



So it is not a matter of the price being 2 cents higher. It is a demand-commodity rate and if the B.C. Electric did buy at 75 per cent load factor they would end up by paying 34 cents.

Now, the B. C. Electric have told me and have told Mr. McDonald that they intend to run at a high load factor, and, if they do that and are able to run at 100 per cent load factor, they will be paying 34 cents.

Q. Well, why did you charge them 2 cents more, with a load factor of 75 per cent?

MR. HETHERINGTON: We didn't charge them any more.

Q. Well, the other price works out at what? Thirty-two cents, doesn't it?

MR. HETHERINGTON: The present price that B. C. Electric is paying is exactly the same as the thermal contract; they both work out the same.

Q. One is take-or-pay on a 75 per cent load factor and the other isn't, isn't that right?

MR. HETHERINGTON: That's right.

Q. Well, was the reason for you charging 2 cents more the fact that Pacific Northwest had increased the price to Seattle by 2 cents?

MR. HETHERINGTON: First of all, I said ---

Q. Didn't the fact there was an increase



of 2 cents by Pacific Northwest have anything to do with this 34-cent figure?

MR. HETHERINGTON: This is a question like, "When are you going to stop beating your wife?"

First of all, we didn't charge them any more; the rate is exactly the same. So I cannot say anything as to a comparison of a change in prices which we did not make. The rate is exactly the same.

Q. Did B. C. Electric consider they should have a rate of 32 cents with a 75 per cent load factor, take-or-pay?

MR. HETHERINGTON: No.

Q. They never expressed such a view?

MR. HETHERINGTON: They wanted the gas for about 20 cents. They wanted it as cheap as they could get it.

Q. Can you ascribe any reason for that difference I mentioned?

MR. HETHERINGTON: There is no difference; the rate is exactly the same. The demand rate is \$3.21 per month for every Mcf on a daily demand, and the commodity rate is 20 cents, and at any load factor, that one rate in the original contract being the same as in the thermal contract, you will come exactly to the same price at each load factor.

Q. Were they seeking to associate that



price with the price that was being paid by the American Pacific Northwest?

MR. HETHERINGTON: They wanted to buy the gas at 22 cents and we told them we could not afford to do that.

Q. And was the reason you could not afford to do it that it was costing you more than that to bring it to the border?

MR. HETHERINGTON: We approached the B. C. Electric with a view to economics and gave them what we felt we would have to pay for the gas, where we thought we would have to go to get it and the cost of the facilities we would require to get the additional gas for the thermal plant and we outlined the matter to them and they naturally saw that we could not afford to do it and they went along with us at the present price rather than insisting on a 22-cent price.

Q. Now I would like to shift the topic of discussion, if I might, to a subhead, and the first one I want to refer to is the prospectus of the company dated September 11, 1957, starting at the bottom of page 17, dealing with the Peace River Natural Gas Company Limited.

Mr. McDonald, who was the principal shareholder of the Peace River Natural Gas Company Limited?

MR. McDONALD: Pacific Petroleum owned



some 52 or 53 per cent of the stock.

Q. And the remainder of the shareholders were Canadian individuals, or what?

MR. McDONALD: Well, they were individuals, both Canadian and United States individuals.

Q. In any way, were any of the officers of Westcoast Transmission holding shares personally?

MR. McDONALD: Oh, yes, there is no question that quite a few of them do.

Q. Any of the officers of Pacific Petroleums owning shares personally?

MR. McDONALD: No question of that.

Q. Outside of the people associated with Westcoast Transmission or Pacific Petroleums, how many shares were held by what I would call the outside public?

MR. McDONALD: Oh, I would say ---

Q. Give us the percentage.

MR. McDONALD: I am sure it is in the prospectus somewhere. I would say roughly 52 per cent ---

Q. I could not find that.

MR. McDONALD: Well, at the bottom of page 21, Mr. Frank McMahon, Mr. George McMahon and Mr. Norman Whittall -- there is a group that owns 36,000 shares out of a total of slightly over 3,000,000 shares issued.

Q. I understand that, but you are



directing yourself to the directors and officers of Westcoast?

MR. McDONALD: That's right.

Q. In addition to that, I am asking about directors and officers of Pacific Pete.

MR. McDONALD: I am sorry I did not make myself clear. Those are the officers and directors of Pacific Pete that I mentioned there. Peace River Natural Gas is a subsidiary of Pacific Petroleum and the officers are practically identical.

Q. So when you use the phrase "directors and officers of the company as of June 30, 1957," as a group, own so much, that means the persons who are both officers in Pacific Petroleum and also in Westcoast, is that it?

MR. McDONALD: No. In Pacific Petroleum -- Mr. Gauthier might have been the nominal secretary for Westcoast at that time; I am not sure. However, Mr. Frank McMahon, Mr. George McMahon and Mr. Whittall were directors of the three companies, Pacific Petroleum, Peace River and Westcoast.

Q. I read that, perhaps incorrectly, as a statement of fact, that certain people were officers, and then it goes on to say, as a new statement of fact, "Directors and officers of the company."

MR. McDONALD: This is a Westcoast



prospectus, Mr. Patillo, and "the company" is always Westcoast.

Q. Now, I am asking about the directors and officers of Pacific Petroleums, separate and apart. What group of shares did they own?

MR. McDONALD: The only other directors of Pacific Petroleums would be the officers that are not named there, and I just don't recollect that I have, anywhere in this prospectus, a notation of their interest.

Q. Would you be able to file with the Commission in percentages only, showing the total number of shares as 100 per cent and then the percentage of the shares owned by Pacific Pete or any of the associated companies of Westcoast Transmission; then the shares of any of the officers or directors of any of the associated companies and then, finally, the shares owned by any person who is completely independent of the group?

I think you had better show, separately, too, the shares owned by any of the officers or directors of any of the underwriting houses or the members of their families and, when I use this phrase, when I am talking about individuals, I include, of course, the members of the family or any investment company which they have a beneficial ownership in.



MR. McDONALD: I will be glad to do that, Mr. Pattillo. It will take a few days to get the information.

Q. I appreciate that.

MR. McDONALD: You are speaking of the date of this prospectus, which is the relevant date to what you are referring to?

MR. PATTILLO: As I understand it, the Peace River Natural Gas Company Limited was wound up, shares of Westcoast Transmission were given, certain of them, for the assets.

Q. Is that true?

MR. McDONALD: That is true.

Q. And then those shares were distributed out to the shareholders of Peace River?

MR. McDONALD: That is true.



Q. And Pacific Petroleum as a consequence received approximately 500-and-some thousand of the shares?

MR. McDONALD: That is right.

Q. And the remainder went out to individuals or other companies?

MR. McDONALD: Yes, to the public -- whoever the shareholders were.

Q. And the result of the transaction was that there was a capital gain in the aggregate of about \$18 million.

MR. McDONALD: No -- I just do not understand. I mean, I do not know what you mean by that.

Q. I will put very clearly what I mean. I think it shows up right here in the prospectus.

"The shares of the production company to
"be acquired by the company under the
"above agreement will be carried in the
"company's accounts at approximately
"\$25,800,000, equivalent to \$24.00 per
"share of company's stock to be issued
"therefor."

Now, at that time Westcoast Transmission's shares were selling on the Exchange for more than \$24, were they not?

MR. McDONALD: Oh, yes.

Q. Sure.

MR. McDONALD: Yes, there is no question



about that.

Q. And this amount is approximately \$18 million in excess of the net book value of the underlying assets to be acquired?

MR. McDONALD: That is the net book value, that is true.

Q. That is the cost?

MR. McDONALD: What page are you reading from, Mr. Pattillo? I am sorry.

Q. From page 18. That is the cost?

MR. McDONALD: That is true.

Q. If something cost so much and you sold it for so much and you made a gain of \$18 million I assume everybody would say that is a capital gain.

MR. McDONALD: I understand. Well, what has happened is this, Mr. Pattillo: The investment was whatever the figure was you mentioned, but whatever the value was at the date of the sale it was \$25 million-odd.

Q. Well, that was an armslength transaction, was it, Mr. McDonald?

MR. McDONALD: I would say it was an armslength transaction. It was fully investigated.

Q. Let us put it like this: Whatever my understanding of an armslength transaction is, and whatever your understanding of an armslength transaction is, would you consider that Peace River -- dealing with Westcoast Transmission and Pacific



Petroleums -- could ever be said to be at any arms-length position?

MR. McDONALD: Mr. Pattillo, there are two responsible Boards of Directors -- three -- involved in that transaction. They are all reputable businessmen, and I think they have devoted to the problem whatever was necessary to make it a proper transaction, in the culmination, for the benefit of the companies concerned.

Q. Do not misunderstand me. I am not saying it is not proper; I am merely saying that you and I know that that is not as we understand the words "armslength transaction"?

MR. McDONALD: I do not want to quibble, but I do not want to be here on this stand and under oath making a statement which I am not sure is a proper statement to make, in the sense that there are many definitions of what is "armslength", as you know as well as I do, and I am not prepared to go to the extent that you want me to go. What I want to say is ---

Q. I would not want to have anybody questioning the transaction at a later time because of any statement you make.

MR. McDONALD: Yes, I think I must look after the interests of my shareholders.

Q. Yes, but you will agree that there is a possible capital gain to the shareholders of



Peace River Natural Gas Company Limited of \$18 million based on the shares of Westcoast Transmission being \$24 a share?

MR. McDONALD: Mr. Pattillo, there is a sale of the stock of Peace River. It was selling on the Stock Exchange for something in the neighbourhood of at least \$8 to \$10. Therefore, it was a three-to-one transaction. The public had already established the capital gain in their valuation of this stock, so as far as a capital loss or a capital gain was concerned it had already been taken into account in the value of the properties.

Q. Now, I would like you to look in the same prospectus at page 44 -- perhaps, before I come to that I can ask you to look at page 43.

MR. McDONALD: Yes, sir.

Q. That is a list of the officers and directors of the company?

MR. McDONALD: Yes.

Q. Mr. McMahon, in addition to being an officer of Westcoast Transmission, is an officer of Pacific Petroleums?

MR. McDONALD: Yes, he is chairman of the Board.

Q. Was he an officer of Peace River?

MR. McDONALD: Yes, I think he was president.

Q. Is he in any way an officer or director



of a company known as Inland?

MR. McDONALD: Not Mr. Frank McMahon, no.

Q. Is he an officer or director of any of the companies other than Pacific Petroleums from whom Westcoast Transmission is purchasing its gas requirements?

MR. McDONALD: I think he is a director of Canadian Atlantic Oil Company from whom we do purchase a substantial amount of gas.

Q. Is he in any way an officer or director of the Jefferson Lake Sulphur group, or ---

MR. McDONALD: No.

Q. ---or Phillips Petroleum?

MR. McDONALD: No, definitely not.

Q. And Mr. George L. McMahon; he is an officer of Westcoast and also of Pacific Petroleums?

MR. McDONALD: Yes, sir.

Q. Also of Peace River?

MR. McDONALD: Yes, he is a director of Peave River.

Q. And the president of Inland?

MR. McDONALD: No -- heavens no.

Q. Is he an officer of Inland?

MR. McDONALD: No.

Q. No?

MR. McDONALD: You have not come yet to the third McMahon.

Q. How can I come to him when you have



left him off? I have only got two McMahons to work with. There is a third one, is there?

MR. McDONALD: That is right.

Q. And do I have to worry about any more after that, or ---

MR. McDONALD: No.

Q. Well, there is a third one in Inland?

MR. McDONALD: He is the president of Inland Natural Gas; John A. McMahon, is his name.

Q. And is John A. McMahon in any of the other associated companies with Mr. Frank McMahon and Mr. George L. McMahon?

MR. McDONALD: He is certainly not in an active capacity. I have not run across him in business except in regard to Inland.

Q. And the next gentleman's name is your own name, and as I understand it you are a director of Pacific Pete and all the associated companies in the Westcoast Pacific organization?

MR. McDONALD: Yes, I am a director of Canadian Atlantic Oil Company, but that is incidental to my legal work rather than ---

Q. All right.

THE CHAIRMAN: May I interrupt you for one moment, Mr. Pattillo. For the benefit of the members of the Commission have you by any chance got two or three copies of this 1957 prospectus?

MR. McDONALD: I might be able to scare



up some; if not, I can have them by Monday by wiring tonight. They were in great demand at one time.

THE CHAIRMAN: Yes, I realize that. I managed to get one for myself.

MR. PATTILLO: Here is one, Mr. Chairman.

MR. McDONALD: I have another one here.

THE CHAIRMAN: Thank you very much.

MR. PATTILLO: Q. Now, Mr. Douglas J. Owen; he is ---

MR. McDONALD: Yes, he is administrative assistant to myself and Mr. McMahon. He is not now a director. His place has been taken by Col. Victor Spencer of Vancouver.

Q. And is Col. Spencer just on Westcoast or is he on any of the ---

MR. McDONALD: Subject to checking, Mr. Pattillo, I am sure he is only on Westcoast.

Q. Now, we come to Mr. Lloyd S. Gilmour. As I understand it, he comes from the City of New York and is a partner in the firm of ---

MR. McDONALD: Eastman Dillon, Union Securities & Company.

Q. Is he a director of all the companies within the Westcoast Transmission group?

MR. McDONALD: No, Mr. Gilmour's association is only as a director of Westcoast.

Q. Is he associated in any way, to your knowledge, with El Paso?



MR. McDONALD: I would say No -- no, he is not associated ---

Q. Or Pacific Northwest?

MR. McDONALD: No.

Q. Mr. Muir, the president of the Royal Bank of Canada; is he a director of just Westcoast, or any of the others?

MR. McDONALD: Just Westcoast, Mr. Pattillo.

Q. And the Hon. Frank M. Ross, the Lieutenant Governor of British Columbia; is he just a director of Westcoast or is he on any other group?

MR. McDONALD: He was a director -- at one time he was a director of Peace River. I am not sure that he was a director at the time of the amalgamation, or not.

Q. Was he a shareholder at that time?

MR. McDONALD: He was definitely a shareholder of both Peace River and Westcoast.

Q. And Mr. Norman R. Whittall, as I understand it, is a broker in the City of Vancouver?

MR. McDONALD: That is right.

Q. Is he a director of all the associated group of Westcoast?

MR. McDONALD: Yes, Mr. Whittall and Mr. McMahon originated all these companies many, many years, and he has continued as a director of all of them down to the present time.

Q. Is he a director of any of the



companies from whom Westcoast is buying gas except Pacific Petroleums?

MR. McDONALD: I would have to check whether he is a director of Canadian Atlantic or not. I am not sure, Mr. Pattillo. He is a director of Inland Natural Gas, though.

Q. Was he one of the promoters of Inland Natural Gas?

MR. McDONALD: He was in at the start, yes.

Q. And what percentage of the shares of Inland Natural Gas does Westcoast own?

MR. McDONALD: Westcoast?

Q. Yes.

MR. McDONALD: It owns none whatsoever.

Q. And what percentage does Pacific Petroleums own?

MR. McDONALD: Of Inland?

Q. Yes.

MR. McDONALD: I think they own stock in Inland. That should be in the prospectus. I will have to enquire, Mr. Pattillo, and give you that information along with this other information.

Q. Thank you. Now, Mr. Whittelsey -- Charles C. Whittelsey; is that it?

MR. McDONALD: Yes.

Q. Is he another partner of Eastman?

MR. McDONALD: No, Mr. Whittelsey is president of Ford, Bacon & Davis, Inc.



Q. That is the company from which Mr. Hetherington came?

MR. McDONALD: Yes.

Q. Is he a director of all the companies in the group?

MR. McDONALD: No, his only association is as a director of Westcoast.

Q. Is he a director of Pacific Northwest?

MR. McDONALD: No.

Q. Or of El Paso?

MR. McDONALD: No.

Q. Or of any of the companies that are supplying gas to Westcoast?

MR. McDONALD: No, he has no connection with them.

Q. Mr. Hetherington we know. I assume that he is a director of the other companies within the group?

MR. McDONALD: Yes. He is not a director of Westcoast.

Q. He is not a director of Westcoat; just vice-president.

MR. McDONALD: No, he an officer of Westcoast.

Q. I see. Now, I have exhausted the list of directors, have I?

MR. McDONALD: You have, Mr. Pattillo, yes.

Q. All right. Now, I would like you to



look at page 44 of the prospectus. There are two paragraphs to which I wish to call attention -- perhaps there is just the one:

"During the period between the organi-
"zation of the Company in 1949 and February
"1953, Pacific Petroleums Ltd., Frank M.
"McMahon for himself and others, partners
"of Eastman Dillon & Co. (now Eastman
"Dillon, Union Securities & Co.), Sunray
"Oil Corporation (now Sunray Mid-
"Continent Oil Company) and E.A. Park-
"ford acquired an aggregate of 500,000
"shares of Capital Stock from the Company
"for an aggregate consideration of
"\$24,998 (Can.) . . ."

Now, stopping there, the Sunray Oil Corporation --
is that the company of which the chairman is Mr.
Wright to whom we referred this morning?

MR. McDONALD: Yes, Mr. C.H. Wright.

Q. And he is the gentleman who was with
you and Mr. Hetherington and Mr. McMahon and Mr.
Fish and Mr. Adams, I think it was, at the famous
interview that we were discussing this morning?

MR. McDONALD: I should correct you so that
you will not get any misapprehension. Mr. Hethering-
ton was not at the meeting in Chicago that you refer
to. That is the reason nothing definite was done at
that meeting.



Q. But Mr. Wright was?

MR. McDONALD: Mr. Wright was there.

Q. Who is Mr. E.A. Parkford?

MR. McDONALD: Mr. Parkford is a gentleman who, with Mr. McMahon, felt that the proposition of developing the Peace River country for gas and moving it to the Coast was a good idea. He introduced Mr. McMahon to Mr. Wright, I think, and then to Mr. Gilmour.

Q. Where does Mr. Parkford live?

MR. McDONALD: He lives in Los Angeles.

Q. How many shares did he get for these introductions.

MR. McDONALD: Well, he was one of the original group, and his interest is 25,000 shares, as indicated here.

Q. 25,000 of the original 500,000?

MR. McDONALD: Yes, that is right.

Q. He got 25,000?

MR. McDONALD: That is right.

Q. Mr. Wright -- was it the Sunray Oil Corporation or Mr. Wright, or both, who got their shares?

MR. McDONALD: Oh, no, the Sunray Oil Company, Mr. Pattillo, is a wholly-owned subsidiary of Sunray Oil Corporation which is acting in Canada. The shares referred to here went to the Sunray Oil Company and, consequently, to the Sunray Oil Corporation. Mr. Wright only held a director's share.



Q. How much did they get of these 500,000?

MR. McDONALD: They got -- just a moment while I look. They got their proportion, 118,000 shares, of that particular distribution.

Q. Yes. Now, what did they get that for? What did they do?

MR. McDONALD: They were the original promoters of the company, and the promoters -- when I say "the promoters" they were the original group under which the company was being carried on, and as you notice the shares issued were issued to all of the shareholders at the same rate. Now, I might explain so that you will understand the context, that the Sunray Oil Company is a 25 per cent owner of practically all of the acreage that is held under the group which is called Pacific Associates group in the Peace River area, and they have borne 25 per cent of the cost of development in that area from 1951 to this time.

Q. Not all of the costs in that area, but all the costs of the people that are selling gas?

MR. McDONALD: Yes, under the Pacific group, as it is called.

Q. Yes. And Eastman Dillon, Union Securities & Co. ---

MR. McDONALD: Yes?

Q. The partners of that concern -- how



many shares did they get at a nickel apiece?

MR. McDONALD: That would be 118,000 shares.

Q. 118,000 shares?

MR. McDONALD: Yes.

Q. And at that time between 1949 and February, 1953 what had they done to get that?

MR. McDONALD: Mr. Gilmour had devoted, I would say, about 25 per cent of his time to the West-coast project. They, again, were originators of the program, and this distribution of shares was the typical thing that is done in practically all the companies distributing to the original shareholders the shares at a nominal value.

Q. Mr. McDonald, you and I do not think alike about that. Now, was that block of shares to Eastman Dillon and Company subsequently transferred to members of their respective families?

MR. McDONALD: Oh -- yes. The partners of Eastman Dillon & Company, since it is a partnership -- when they arrived they were distributed to the individual companies and retained as capital of the business, and disposed of as they saw fit, but the partners did get their proportionate interest in the shares.

Q. I read somewhere that they distributed them out among members of their families, or, at least, some of them had done so.

MR. McDONALD: Yes, I think so.



Q. Yes, a nice present. Now "Frank M. McMahon for himself and others" -- what was the block that Mr. McMahon got?

MR. McDONALD: 118,000 shares.

Q. And can you tell us to whom they were distributed, including himself, and in what quantities?

MR. McDONALD: Well, I can tell you about my own.

Q. Yes?

MR. McDONALD: It got 10,000 shares out of that lot. I purchased 10,000 shares from Mr. McMahon for the same 5¢.

Q. Yes?

MR. McDONALD: Now, the other associated -- the only one I know definitely of would be Mr. George McMahon. No doubt he had an interest, but offhand I cannot give you any more particulars than that.

Q. Is it possible to determine that from the share registry? Who would be in this group -- or is the only person who can give us that evidence Mr. McMahon himself?

MR. McDONALD: I would have to look at the records of the company. I am sure that it could be done, Mr. Pattillo. I can look.

Q. I understand Mr. McMahon is not well and is presently in New York.

MR. McDONALD: He is in New York, yes.

Q. And he is unable to be here because



of illness. Well, the Commission would like to have that information as to who got those shares allotted to Mr. McMahon and his group, and the quantities in which they were allotted.

MR. McDONALD: Yes.

Q. Now, Pacific Petroleums Limited -- how many shares did it receive of the 500,000?

MR. McDONALD: 118,000 shares.

Q. 118,000?

MR. McDONALD: Yes.

Q. Now then, we go along continuing to read the paragraph: ". . .and in April 1955 ..." -- that is when you knew the thing was really going to go ---

MR. McDONALD: No, that is when we had a contract with Pacific Northwest. We had nothing else but that contract.

Q. --- and that approval -- did you have approval from the Federal Power Commission at that time?

MR. McDONALD: No.

Q. Not in April, 1955?

MR. McDONALD: No, not until November of 1955.

Q. I see. But, you had the contract then?

MR. McDONALD: That is true, yes.

Q. So then an additional 125,000 shares of capital stock were acquired from the company by



Pacific Petroleum Limited, Frank M. McMahon for himself and others, partners of Eastman Dillon & Company and Sunray Oil Company, for the nickel a share?

MR. McDONALD: That is true, Mr. Pattillo.

MR. FRAWLEY: Is this an additional allotment?

MR. PATTILLO: Yes, somebody had decided that they needed a little more.

Q. How were these 125,000 divided up?

MR. McDONALD: Well, these were divided in exactly the same proportion as was the original 500,000 or very close to it. Mr. Parkford did not participate in this, Mr. Pattillo.

Q. He had been paid for his introductions?

MR. McDONALD: Well, his interest had terminated at that point.

Q. So, did Eastman Dillon -- perhaps you can explain to us, Mr. McDonald, what was the reason for the additional 125,000 shares?

MR. McDONALD: The shareholders decided that the base stock, as it were, could be increased on from 500,000 by 125,000. You see, nobody had an interest in this stock except these individuals, and if they wanted to distribute it on that basis there was no reason why they should not.

Q. It only meant that the coffers of the company were not going to have as much cash as they



might otherwise have?

MR. McDONALD: No, decidedly not, Mr. Pattillo. It had no bearing at all on the financing of the company.

Q. We will deal with that in a moment.

MR. McDONALD: Mr. Pattillo, just before you leave that I think I should read the prospectus so that the record will have the full details of this at the one time.

Q. What have I omitted?

MR. McDONALD: I am reading from the prospectus of April 23rd, 1956. After detailing what you have just mentioned the prospectus goes on ---

THE CHAIRMAN: What page is this, please?

MR. McDONALD: That is not the prospectus---

THE CHAIRMAN: I have the prospectus of April 23rd.

MR. McDONALD: That is page 3.

"The price paid for such 625 shares
"was, accordingly, approximately 5¢ per
"share. The public offering price of the
"shares of Capital Stock (including that
"portion of the public offering price
"of the Units allocable to the shares
"of Capital Stock included therein)
"being offered hereby is \$5 per share.
"The difference between the cost of
"such 625,000 shares to the promoters



"of the Company and the cost to the public
"of an equal number of shares acquired at
"the said public offering price would be
"an aggregate of \$3,093,752. In view of
"the difference in circumstances existing
"at the times when the outstanding shares
"of Capital Stock were issued and those
"existing at the present time, the Company
"believes that no inference that the
"consideration received by the Company
"for such 625,000 shares and that received
"for the shares being offered hereby should
"necessarily bear any relation to each
"other is justified."

That was a warning to anybody who wanted to pay \$5
that these were outstanding -- that the 5¢ stock was
outstanding.

Q. Now, perhaps I should ask this about
the 625,000 shares issued that we have just been
talking about. Are they all still held by the origi-
nal holders, or ---

MR. McDONALD: I have no means of -- I
have no way of determining that.

Q. Well, the share registry would dis-
close that, would it not?

MR. McDONALD: It would disclose the gross
amount of shares owned by these individuals, yes.

Q. It would be possible to trace from the



share registry, would it not, whether these shares had been sold, or any part of them?

MR. McDONALD: It may be, Mr. Pattillo. We have, Mr. Pattillo, in excess of 18,000 or 19,000 shareholders.

Q. Yes, I am not saying it would be an easy task, but I am merely suggesting that it could be done. Now, we come to the top of page 46.

"By agreements dated February 1, 1955, ..." -- and you remember that the last 125,000 was issued in April, 1955?

MR. McDONALD: Yes.

Q. "By agreements dated February 1, 1955, "as amended December 29, 1955, the Company "granted options to Frank M. McMahon and "Eastman, Dillon & Co. (now Eastman Dillon, "Union Securities & Co.) to purchase a "maximum of 200,000 shares each of Capital "Stock at a price 20% more than the "offering price to the public of the shares "of Capital Stock of the Company at the "time of the initial public offering of "its securities (the option price to be "calculated in Canadian funds as to Mr. "McMahon and in United States funds as "to Eastman, Dillon & Co.). Said initial "public offering was made in April 1956, "and the offering price of the Capital



"Stock was \$5 per share, and the option
"price was accordingly \$5.97 (Can.) per
"share to Mr. McMahon and \$6.00 (U.S.)
"per share to Eastman, Dillon & Co.)"

Now, just stopping there, I notice that the offering price was to be \$5 per share. What were the shares trading at, do you know, on the day of the offer to the public -- what price?

MR. McDONALD: There was not any trading for the simple reason there were no shares outstanding. You are talking about across the counter offerings in anticipation?

Q. Yes.

MR. McDONALD: I do not know. I think it was better than \$5, Mr. Pattillo, but I really do not know. I was too busy at that particular moment to inquire into it.

Q. But you would be able to give us that information?

MR. McDONALD: You would have to look at the over-the-counter transactions of some reputable broker some place. That is the only way to find out.

Q. And you have no recollection at all as to what they were?

MR. McDONALD: No, honestly I do not. There was some premium -- they were better -- there was what is called the anticipated market for two or three days.



Q. What I am going to suggest to you is that the over-the-counter price when these shares went on the market was in excess of this option price to which I have just referred. Was that not so?

MR. McDONALD: It would be better than \$6. If it was better than \$6 that would be the case but, you understand, that there is not, Mr. Pattillo, a ready trading because the stock was not available, and it is against the rules of the Exchange, and it is only the offerings as between brokers that establish the price.

Q. Now, the option to Mr. McMahon expires January 31st, 1960, and the option to Eastman Dillon expires on January 31st, 1965?

MR. McDONALD: That is right.



Q. "The consideration paid by Mr.
"McMahon and by Eastman Dillon
"& Co. to the Company for these
"options was at the rate of 1/2c
"(Can.) per share of Capital Stock
"subject to the options. As of
"July 31, 1957, the option
"granted to Mr. McMahon was un-
"exercised as to 177,500 shares ---"

In other words, he had taken down 22,500 of his
200,000?

MR. McDONALD: That is right.

Q. "--- and the option granted to
"Eastman Dillon & Co. was unexer-
"cised as to 20,510 shares."

The partners there had taken down 179,490 shares.

MR. McDONALD: That is true.

Q. Can you tell us what the over-the-
counter price was for those shares as of July 31,
1957?

MR. McDONALD: It was somewhere between
\$40 and \$50.

Q. Do you know whether or not the
partners of Eastman Dillon & Company, or their
families, or whoever got this 179,490 shares,
whether they still have them or whether they dis-
posed of them?

MR. McDONALD: No, I do not have any



specific knowledge of that.

Q. That could be traced, I assume?

MR. McDONALD: It possibly could, Mr. Pattillo.

Q. Are you in a position from the shareholdings, from the list, which partners of Eastman Dillon & Company got those shares?

MR. McDONALD: If they exercised their options, we certainly can tell you what they exercised and what remained to each individual partner. There is no question about that.

Q. It goes on to say here, I suppose you must have got this information for the prospectus,

"The options granted to Eastman

Dillon & Co. were distributed

"by that firm to its partners

"(or members of their families)

"and the Company is advised that

"options in respect of 18,400

"shares were exercised by such persons (and the stock is

"still held by them), options

"in respect of 161,000 shares were

"sold by them for an aggregate

"consideration of \$4,927,179.57

"(U.S.) --"

Mr. McDonald, what did they get all that for?



MR. McDONALD: I am sorry, I forgot that this item was there. That is something that is required under the Security Exchange Regulations of the United States. Eastman Dillon & Company are brokers.

Q. Why did Eastman Dillon & Company get all this stock?

MR. McDONALD: Because they held the option in 1955, or whenever it was.

Q. Why were Eastman Dillon & Company granted the option in the first place? They got their share of 625,000 nickel shares.

MR. McDONALD: That is right.

Q. Then 200,000 shares, and they made at least, on those 200,000 shares almost \$5 million.

MR. McDONALD: That is right.

Q. What did they do?

MR. McDONALD: I will just tell you what they did -- the reason -- what I believe are the facts. Mr. Lloyd Gilmour is head of one of the three or four largest banking houses in the world and one of the outstanding financiers and he, at the time, as I said devoted almost 25 per cent of his time, for many years, to this project. At that time he disassociated himself from his other functions and if you realize the extent of this financing company, that was a real contribution to this company and to Canada and to the Peace River area and



when the question of the options arose, he was given an option by the company and, in the ordinary course of business, it is done in business in all similar cases.

Q. Did they not receive their share of commissions and payments as brokers?

MR. McDONALD: They received whatever was their proportion of the underwriting commission and that was less than one-half of one per cent. They also went out and provided us with our future -- they provided for all the banking.

Q. You mean they introduced you to the bankers?

MR. McDONALD: Yes, they carried the ball. That is their business. They established the relationship under which we borrowed \$83 million; in one group we got \$29½ million at 3½ per cent. As a matter of fact, the Westcoast operation was the cheapest as to interest rate in the United States in 1956 due entirely to the financing of Eastman Dillon & Company.

THE CHAIRMAN: Do not say due entirely to others.

MR. McDONALD: No.

THE CHAIRMAN: I do not think you want to say due entirely ---

MR. McDONALD: No, I would not want to put it that way. I am sorry. I got enthusiastic.



THE CHAIRMAN: Gentlemen, we will now have a ten-minute break.

---Short recess.

THE CHAIRMAN: Gentlemen, the Commission will now resume its hearing. Mr. Pattillo?

MR. PATTILLO: Mr. Chairman, Mr. Lewis of Jefferson Lake Sulphur, as you will recall, came here and read their submission. He has to leave early in the morning and to try and meet his convenience I am suggesting that the examination of the Westcoast witnesses be set aside for a few minutes. It will not take us very long to deal with Mr. Lewis but there are a few questions we want to direct to him and with your permission we will ask Mr. Patterson to examine him.

THE CHAIRMAN: Very well.

---F. E. LEWIS, previously sworn

BY MR. PATTERSON:

Q. Mr. Lewis, I think we have reference to your submission as Exhibit C-12-3 and in that brief you make reference to various companies having various operations in the United States and Mexico. For our information would you give us a short statement as to the position of the American company, Jefferson Lake, in regard to the American operations



and the Mexican operations.

A. We are the third largest in size in the United States and we have no operations in Mexico.

Q. One thing, sir, as to the proposed Canadian company, could you tell me, again, the name of that company?

A. Jefferson Lake Petro Chemicals Limited.

Q. And that, as I recall, you said was presently being put together and that in the next two or three months you anticipate the financing, and so on, to be completed?

A. That is correct.

Q. And in regard to that proposed company, could you tell us whether or not the companies with whom, apparently, you will be dealing either directly or indirectly in Canada, such as El Paso, Phillips Petroleum, Pacific Pete and Westcoast; will they have share interests in that Canadian company?

A. We will not have any share interest with anyone other than, perhaps, Westcoast. At the present time Westcoast has an option to acquire the 10 per cent interest in the Peace River plant and if we can reach an agreement on valuation on that and other properties we hold in Canada at the present time, then we hope to trade with Westcoast for

1. 20. 1950

2. 21. 1950

3. 22. 1950

4. 23. 1950

5. 24. 1950

6. 25. 1950

7. 26. 1950

8. 27. 1950

9. 28. 1950

10. 29. 1950

11. 30. 1950

12. 31. 1950

13. 1. 1951



shares in the new company.

Q. When you mention properties that you hold in Canada, I take it that those presently are held by the American company or are they held by the Canadian company?

A. They are presently held by the American company.

Q. And they are what; land or mineral interests?

A. Mineral interests and wells which we have drilled on the acreage which we presently hold.

Q. Could you review this acreage which you presently hold?

A. We have,, approximately, or the right to acquire, approximately, 80,000 acres in Alberta -- mineral leases on 80,000 acres. Actual-ly, at this particular time, I am not sure of the exact acreage that has been transferred. The way the agreement is with Mobil Oil of Canada we transfer acreage as we drill wells. Then when we proceed with the processing plant all of the leases will then be transferred.

Q. And would the 80,000 acres relate, in the main, to what I understand has been development work carried out by your company in what we have been describing as the East Calgary field?

A. That is correct, the East Calgary



field.

Q. And your main interest there has been in exploring that particular strata, has it, that is sulphur bearing?

A. That is correct. We originally took that format out with the idea of developing and exploring the Devonian formation which has a very high hydrogen sulphide content. We have since proven and developed two other formations, the Mississippian and the Basal-Blairmore.

Q. Is it common practice or a new departure for sulphur companies, such as yours, to enter into exploration work of that nature?

A. We are also in the oil and gas business. In the United States we have an oil and gas division and we have a fairly extensive acreage in Texas, Louisiana and Oklahoma so, from that standpoint it was not unusual or outside of our normal scope of activities. We have, you might say, pioneered the idea of exploring and developing gas reserves with the idea of developing those as a sulphur reserve.

Q. Would it be fair to say you are interested in that type of development in Canada, initially, in order that while you are building up a sulphur market you may be able to make some arrangement for some sort of a basic revenue from gas?



A. That is correct.

Q. Now, sir, a matter of interest at some stage may be the question of accounting procedures in the processing of sulphur through plants that are handling this acid gas stream from wet gas. What I am getting at, sir, is an outline from you of the normal procedure or procedures for setting up a cost-sharing structure for one of these plants. Could you assist me in that regard?

A. Where you have a complete unit including an elemental sulphur plant, as a single operating entity, then you would allocate your costs between the elemental sulphur plant and the process plant according to usual accounting procedures; a proper allocation of capital investment, operation and maintenance. In the one case, the Peace River plant, we are only a process plant, and we buy acid gas from Westcoast.

Q. Would that allocation of costs in the -- I take it, the Calgary proposed setup is one where you have both the Amine and Claus process. Is that so?

A. That is correct.

Q. Would the allocation of costs there be determined in any way, having regard to the sulphur market, whether or not you could dispose of sulphur?

A. No, you would allocate your costs



on the basis of actual operating costs.

Q. What consideration has your company given as to the development of the East Calgary field and your other proposed development in the event that the Westcoast proposal does not succeed in going ahead? That is, have you considered the matter of making similar arrangements with Trans-Canada or Alberta and Southern?

A. Very definitely; we would certainly need a market for residue gas because we would be obligated to go ahead with our developmental drilling and with the construction of a plant, so we would certainly be out looking for a customer. As a matter of fact I think Mr. Manning has already approached the City of Calgary. I believe it is Canadian Western who has a potential deal for part of the gas.

Q. Turning for a minute to page 5 of your submission, the second last paragraph,

"Speaking specifically with
"respect to the Jefferson Lake Sulphur
"Company plant at Taylor, British
"Columbia, it is the opinion of the
"officials of the company that a
"market can be established for the
"sulphur produced from that plant in
"competition with sulphur from com-
"petitive sources."



Now, can you tell me a little more about that market and where you think it may be?

A. Yes, sir. The market, as we see it, for the sulphur produced from that plant is the market in British Columbia, Washington and Oregon. The competitive producers are serving and can serve plants in Wyoming, of which we have one, Gulf Coast producers are today shipping out around through the canal and up the west coast and, of course, the British American plant at Pincher Creek. The British American plant and the other two plants located here in Alberta have a fair market for sulphur in Alberta and the Northwest Territories for the uranium mining although a good bit of the British American product, I think, has gone to the west coast. Mainly that market has been served in the past by Gulf Coast and Louisiana by sulphur shipped by boat and that is what we consider our main source of competition. We have had only a small portion of that market in the past but we are working diligently to acquire all of it that we can.

Q. Turning back, for the moment, to the brief where you set out a table showing the consumption of sulphur in various areas of Canada today. I take it that the bulk of the Eastern Canadian market is supplied by Pyrites -- do you call it Pyrites?



A. Pyrites.

Q. And those are located, to some extent, in New Brunswick and Nova Scotia?

A. This, I believe, refers only to elemental sulphur that is being included in the consumption of Pyrites.

Q. On page 4 of your submission, sir, you suggest that there might be some need for a commodity rate structure on sulphur and I would be interested in your telling us whether or not you feel that Eastern Canada and the middle western United States markets can only be reached by sulphur operations in Alberta, provided either special protection or commodity rate structures are worked out?

A. Sulphur, traditionally, moves on a so-called commodity rate of other heavy chemicals and big tonnage commodities. It has been traditional that the railroads established commodity rates on sulphur at the same rate as other heavy chemical commodities. As a result, a pattern of rates has been built up and the lower so-called class rates do not apply so that the sulphur that moves from the Texas gulf coast and the Louisiana gulf coast moves on those commodity rates that have been established over a period of many years.

There has never been any production of



of sulphur, of course, in Western Canada until now and, consequently, there was no reason to establish such rates from Alberta points as origin but we feel that there will be a need now for these commodity rates and we feel that the railroads, in all reasonableness, will recognize that the commodity rates should be, essentially, the same. Mileages are essentially the same so we cannot foresee that there should be a great deal of difficulty about getting these commodity rates established. Canadian railroads have already said, the president has said the commodity rates that were established from Wyoming to the west coast were matched by Canadian railroads going west.



MR. FRAWLEY: From what Canadian origins?

A. From Pincher Creek, Jumping Pound and Turner Valley.

MR. PATTERSON: Q. Do you envisage that this is something of what you might call a pilot operation and that you may at certain times, as you are working toward gaining a market, find yourself in need of stockpiling sulphur?

A. We feel very confident we will have to stockpile sulphur as we go along.

Q. But, fortunately, sulphur is relatively inert and not too difficult to handle in large quantities to store for a fair length of time?

A. That is correct. We normally carry large quantities on the Gulf Coast in what we call vats, which are blocks of sulphur. I might mention one more point about the sulphur commodity rates; I didn't completely answer your question. There will have to be commodity rates established in order to reach the market.

Q. Yes?

A. It cannot be run with just a class rate, as you would have at present.

Q. Some of the more facetious amongst us, and some from parts considerably to the East of this area, have asked me whether or not, in the event you have to stockpile, you have considered running a pipeline from the Maritimes to here to carry molasses?



(Laughter)

MR. FRAWLEY: Mr. Chairman, I have some questions to ask Mr. Lewis, but I am afraid we won't be through. This gentleman has to leave early tomorrow morning, and I don't think for a moment that both myself and Mr. Helman could finish. I do want to pursue with this man what you have discussed with Mr. Proctor the other day, and perhaps I should go ahead. However, Mr. Helman has a very real interest in this East Calgary field.

THE CHAIRMAN: Let us try it, Mr. Frawley.

BY MR. FRAWLEY:

Q. Mr. Lewis, on the 11th of February, according to the transcript at page 951 and going over to 916, the Chairman questioned Mr. Proctor of the Canadian Petroleum Association: do you know Mr. Proctor?

A. No, sir, I don't.

Q. Mr. Proctor is the managing director of the Canadian Petroleum Association. I haven't got the text of the transcript here, but I have made a note, and this is, I feel, a fair summary. The Chairman suggested that there was a large amount of sulphur, and he asked Mr. Proctor, would it be a deterrent to the utilization and development of those fields where the gas is contaminated by sulphur dioxide having regard to the market facilities.



Mr. Proctor said it would not be a deterrent, that no company considers in its economics a very high price for sulphur; and the Chairman said, "Must an economic market be found for sulphur?", and Mr. Proctor said, "No, not necessarily." The Chairman said, "It might be dumped as a by-product?", and Mr. Proctor said, "It might be. In my opinion it is not vital to the development of the gasfields."

Do you subscribe to what Mr. Proctor put on the record?

A. Not entirely, no, sir. It has to be qualified in this respect, that it depends upon the concentration of hydrogen sulphide present in the gas; that it certainly costs a great deal more, in this pipeline gas, when you are treating a material that has 36 per cent hydrogen sulphide in it. That is 12 tons of sulphur per million cubic feet of gas.

Q. You are coming up here to develop sulphur to sell in the markets of the world?

A. Yes, sir.

Q. And chiefly, I think, from what you have told us, into the westcoast and into the States of Oregon and Washington -- and did you say any other place?

A. Yes, sir; the middle western section, or the Central States and Central Canada.

Q. And into Central Canada?

A. That is correct.



Q. Are you making any sulphur at the Taylor Frasch plant now?

A. Yes, sir.

Q. Is it being moved out of there?

A. No, sir; the railroad is not finished yet.

Q. So it has to move by rail, has it?

A. That is correct.

Q. Does it lend itself to highway transportation at all?

A. No. Highway transportation costs are entirely too high except for very short distances. We do move a little sulphur in the United States by truck where we have very short hauls of something like 40 or 50 miles, but I think the longest highway move of sulphur I know of is 110 miles.

Q. Is that because it has to have special equipment for highway movement?

A. No, it is because it moves at such low commodity rail rates, and the trucks simply cannot operate hauling 15 to 20 tons; they can't operate over long distances hauling that amount of sulphur in one truck.

Q. In the Jefferson Lake Sulphur Company what is your particular position?

A. I am vice-president in charge of sales.

Q. Are you also the traffic manager, or do you have a traffic manager?



A. We have a traffic manager who is responsible to me.

Q. Has the traffic manager made a survey of the Canadian freight rate system?

A. He is pretty well along with it right now, and we expect to have a proposal from the Canadian Pacific and Canadian National lines on sulphur moving eastward very shortly. In the past year we have been devoting most of our efforts to establishing the rail rates to the Peace River plants.

Q. You expect to move it by rail over the P.G.E. when needed into the Peace River area?

A. That is correct.

Q. Down to their end of steel in the Vancouver area?

A. Yes.

Q. And then rail it by some inter-connection into the American States you expect to supply?

A. Well, it can move in out of Vancouver either by rail or by barge.

Q. Well, I mustn't take up the very limited time with a detailed rate discussion, but you do expect to move it by rail to wherever it is going?

A. No, not entirely; it can be moved by barge.

Q. I am talking about Oregon and Washington.



You have got it at the end of steel on the P.G.E.:
now, divide it up for me as you intend to market
it.

A. That will depend on how good the
rates are we get on the American railways. If it
is not as good as by barge, we will move it by barge.

Q. You will barge it out of Vancouver,
but how and where will you put it back on the rails?

A. Most of these places are located on
the water and we can move directly to their docks
by barge.

Q. And you think you can move in compe-
tition with Texas Gulf sulphur, moving by barge up
to the Pacific Northwest?

A. Yes, sir.

Q. I suppose one must keep in mind the
size of your competitors as well as the distance from
the market the P.G.E. can go?

A. I don't quite understand.

Q. The fact that the Texas Gulf is a
giant in this industry is something to do with
their ability to market their product far away?

A. No, we haven't had any trouble get-
ting to the customer.

Q. The largest producer in the world is
Texas Gulf Sulphur, which produces approximately 50
per cent of all elemental sulphur produced in the
United States. Their Bowling Dome is the largest



of the producing domes, and alone has supplied in the neighbourhood of 50 million tons?

A. That is right.

Q. The second largest producer is Freeport Sulphur, which has recently substantially increased its sulphur reserves by its arrangement with Humble Oil and Refining for a new sulphur production off the coast of Louisiana. Starting about 1959, this off-shore production is expected to yield in the neighbourhood of one million tons of sulphur annually. The third producer is Jefferson Lake Sulphur, and the fourth is Duval?

A. That is correct.

Q. The Shell Company makes sulphur at Jumping Pound?

A. Right.

Q. And they are selling that into the pulp mills and paper mills on the West Coast in the Vancouver area?

A. I think they are serving one pulp mill. They are presently shipping only to one pulp mill, and that is the Columbia Cellulose plant on the French River. Some of their sulphur, to my understanding, goes to the uranium mills in the northern part of Alberta and the Northwest Territories.

Q. We cannot hope to discuss anything more than the highlights here, but do you know what the basis is of that rate which you say Jumping



Pound has got to meet the competition from Wyoming?

A. When you say "basis" . . .?

Q. I mean on a ton mile -- do you know what ton mile rate the railways gave Jumping Pound to let them into the market against Wyoming sulphur?

A. No, I don't have that figure.

THE CHAIRMAN: Mr. Frawley, excuse me for interrupting, but has this any bearing on the Commission, with respect to sources of energy? Sulphur is really not -- I know that you are concerned, you and Mr. Helman, because it has to do with the City of Calgary and the Province of Alberta, but I don't see where it fits into the Commission's terms of reference. Perhaps you will tell me?

MR. FRAWLEY: Well, Mr. Chairman, I was developing it, or taking as my thesis your exchange with Mr. Proctor the other day. I am certainly far from endeavouring to throw cold water on the development of the sulphur industry in Alberta, but I thought it was my duty to point out to this witness -- and I should not say "point out" to a man in the industry -- but to call to his attention some of the difficulties he is going to have in an endeavour to market sulphur in Canada, and I wanted to discuss it with him for just a moment, because if he is insisting he must find an economic market for his sulphur, then that might affect very greatly his development of any gas reserves in this Province



for seeking the extraction of sulphur. I don't think he will do it unless he can find a market for it, unless he agrees with Mr. Proctor, that he will produce it and dump it. However, I rather took it that he did not agree.

Q. You would not be developing in the lower zone in the Calgary East field if you were only going to produce residue gas?

A. It would be economically impossible.

Q. So, you have to have a market for that sulphur?

A. That is correct.



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/2

Q. And you are really coming up here to sell sulphur and market it on an economical basis?

A. Yes.

Q. And at the moment I am not saying to you that you cannot -- because you are in the business -- but, if you cannot do it, it will affect your whole approach to the development of the sulphur gas reserves in this Province?

A. Yes.

Q. Let me put one problem to you, because I may tell you, Mr. Lewis, that, having in mind the promotion of the interests of the Province of Alberta, I discussed it with one of the leading potential customers of your sulphur, the E.B. Eddy Company in Ottawa and Hull, the supply of sulphur from Montreal, and he told us he was buying Texas Gulf sulphur, put on the docks in Montreal, by barge and boat, put on the docks, and only had to haul it 100 miles.

Now, I put it to you, Mr. Lewis, do you think you could ever put Alberta sulphur -- and I say, in parenthesis, I hope you can -- but do you really think that you can put Alberta sulphur into competition with a haul of 100 miles from the Montreal docks?

A. No, sir, we didn't intend to. The place we are looking for a market and expect to find a market is in the States, around the Great Lakes,



such as Illinois, Wisconsin, Minnesota and Michigan and in Western Ontario.

Q. In the Western Ontario area?

A. Right.

Q. Why do you think you could reach --
no, just strike that question out. I will not pursue that any further.

THE CHAIRMAN: It is possibly not ---

MR. FRAWLEY: It is a very interesting excursion.

THE CHAIRMAN: I agree with you.

MR. FRAWLEY: I rather agree with you, Mr. Chairman, it has a limited application here. I think I have established now the extent to which this witness agrees and does not agree with Mr. Proctor.

THE CHAIRMAN: We all appreciate your interest in the Great Lakes.

MR. FRAWLEY: Thank you very much. I am glad some people do.

MR. HELMAN: Mr. Chairman, I must say, in opening this cross-examination, that I think the problem of sulphur is vital to the problem as to whether or not gas can be produced from sulphur formations, for the reason that we have the picture of



the East Calgary field which has a 30 per cent sulphur content and a price that was given in the figures which were elaborated by the witnesses of Westcoast at \$20 a ton, and I must ask myself how many tons will be permitted to lie on the Prairies without any market for them at that price.

BY MR. HELMAN:

Q. Now, Mr. Lewis, do you agree that the price of \$20 a ton is the price it is going to cost to produce sulphur at the East Calgary field?

A. The cost of production of sulphur?

Q. Yes.

A. No, that is not the cost of production.

Q. What is your cost of production?

By the way, are you an engineer or just a salesman?

A. I am an engineer.

Q. Where did you graduate from?

A. The University of Texas.

Q. What in?

A. Chemical engineering.

Q. Chemical engineering; all right.

Now, have you any idea what it is going to cost to produce a ton of sulphur in the East Calgary field?

A. I don't have the exact figures but I would say it would be in the range of \$15.



Q. Well, that isn't the price that is contained in one of these exhibits. It is \$20.

A. I think that is a sale price; the estimated sales price.

Q. You are going to sell it, then, at \$20?

A. Ordinarily, in making cost estimates, you take a conservative figure, and I think that is probably how the \$20 figure was arrived at. It was not our figure and I was not here at the time it was presented, so I am not familiar with the figure, at the moment.

Q. Let us take it, shall we, as \$16 a ton, as the cost to produce here in East Calgary. Would you say that would be a general cost in Alberta in similar sulphur fields?

A. I would say that should be a reasonable figure.

Q. And your ability to market that sulphur will depend on its proximity to a railroad?

A. That is correct.

Q. And there are plenty of fields that contain high sulphur contents that are not near a railroad?

A. That is true. Of course, you have also the possibility that you can pipe the sour gas, if it has been dehydrated so that it is dry; it can be piped very safely quite long distances to a treating plant on a railroad.



Q. Well, it is a comparatively short distance, isn't it, that you can pipe sour gas?

A. Oh, no, you can pipe it long distances. As long as you can keep it dry, you have no problems.

Q. But that is a more expensive matter, to pipe it, isn't it, than ordinary dry gas?

A. No, it would be dry gas once it is dehydrated.

Q. Pardon my use of terminology. I mean ordinary sweet gas.

A. No, you use the same steel pipe.

Q. It would not corrode any faster?

A. No, not if it is kept dry.

Q. Excluding the United States, in your figures on sulphur -- can you turn to Table 3?

A. Table 3A?

Q. No, Table 3. It says, "Sulphur production, excluding the United States," and then a second column entitled "Canada", and a figure of 1,400,000 tons.

A. That is correct.

Q. How did you arrive at that figure?

A. We took the reserves of gas that we thought were being developed and would be developed over the period up to 1965 and, knowing what the sulphur content of that gas was, we projected this amount of sulphur as being produced from the gas that would be treated by that time.



Q. Did you take into account the Alberta Southern amount of sulphur it would be producing, as well?

A. I don't recall the exact figures because I had one of the fellows in the office do this. I did not personally make up this table, although I did look it over when he had done it. I know they incorporated into it our development in East Calgary, where we had made our possessions, and the amount of sulphur we would be producing at that time, the proposed plant at Savanna Creek; the plant at Peace River; the Jumping Pound plant and the British-American plant at Pincher Creek.

Q. That was the sum total of what you figured in order to arrive at this figure of 1,400,000 tons?

A. No, I believe there were two others included in that, one at Okotoks; the Devon-Palmer Oil Company; the Shell Oil Company and Texas Gulf Sulphur Company jointly proposed a plant, and I believe the other one -- I don't remember the name but it probably was the Alberta Southern plant, but it was not referred to by that name.

Q. Well, the Alberta and Southern do not invest in plants in their scheme. They think the producer is going to turn over sweet gas to them.

A. I see.

Q. I am just suggesting that you did not



include in that projection any new fields of sulphur that would be produced by 1965. I think that is the date you give.

A. No, that is correct. We did not try to project anything we didn't know about or, at least, feel we could reasonably foresee at the present time.

Q. I see. Assuming you are the sole firm -- or perhaps there would be others coming in -- to sell this 1,400,000 tons of sulphur, have you a market for 1,400,000 tons of sulphur?

A. Well, there is a market in the United States and Canada, within a logical distance, for a commodity around the Great Lakes on the same basis as the existing rate pattern in the United States. That is presently 2 million tons. It will certainly be larger than that in 1965. We expect, by 1965, it would be, perhaps, 2,400,000 or 2 1/2 million tons in that same area.

I also made the comment, in the brief, that it would be necessary to establish export rates, because eventually you would expect to capture the entire market and would certainly have to look to export markets.

Q. Take the markets which are presently in Oregon and Washington and in British Columbia which you discussed. Would they be absorbing any sulphur?

A. 275,000 tons in 1956, almost exactly



on the nose.

Q. Take the markets you expect to reach in the centre of the United States. How many tons would they absorb?

A. Well, about 1,750,000 tons.

Q. About 1,750,000? Where are they presently getting their sulphur from?

A. Most of it is coming up from the Gulf Coast at the present time.

Q. Most of it comes from the Gulf Coast, and how does it come?

A. Partly by rail and partly by barge and then by lake steamer into the Great Lakes area.

Q. It goes largely by water, doesn't it?

A. No, I would say it is fairly evenly divided.

Q. Which part goes by rail?

A. I beg your pardon?

Q. Which part goes by rail?

A. It is hard to say; perhaps 50 per cent of it moves up by rail.

Q. Where from?

A. From Texas and Louisiana.

Q. To where?

A. To the Great Lakes and the Central States. We ship quite a bit of it ourselves. We have customers up there now.

Q. I know. How much is your market there?



A. At the present time we are not shipping more than perhaps 40,000 tons into that market.

Q. So you expect to capture a lot more customers of your competitors, is that it?

A. That is correct.

Q. What rate do you expect to get, going to, say, Fort William, which is where you want it to go to from this part of the world?

A. I would rather not make that comment until we have completed this rate study.

Q. At what rate would you think you would be able to compete?

A. Again, I do not have the figure.

Q. You have no idea what rate you are going to require?

A. I would rather not make a premature comment on that, right now.

Q. Well, you are not under oath right now.

MR. CHAMBERS: Oh, yes, he is.

MR. HELMAN: Oh, yes, you were sworn the other day. Well, perhaps the Commission will release you from your oath so that you can make an intelligent guess on it.

THE WITNESS: I don't want to make a guess on anything that serious.

Q. You know that the rate of moving coal from Alberta to Fort William is somewhere in the neighbourhood of \$8 or \$9 a ton?



A. I am not familiar with the coal rate.

MR. FRAWLEY: It is \$13 to Toronto, to back it up a little bit, if you like.

MR. HELMAN: As I foresee it, unless we get a market, we are going to have a tremendous loss of a very valuable asset.

THE CHAIRMAN: Is this really not a problem that should come primarily before the Conservation Board of Alberta? The Commission, itself, would never sit down to allocate or make any recommendation as to the allocation of fields in the Province of Alberta. It is not within the terms of reference. We would have no business doing that. Really, what is happening is that you are discussing matters with Mr. Lewis which, as I see it, should be discussed before the Conservation Board when the applications of Westcoast and Alberta and Southern, whatever the proceeding is, come before that Board.

THE WITNESS: I would be most happy, at any time, to come before the Conservation Board to go into this.

MR. FRAWLEY: I think you had better see the railroads first and then the Conservation Board.

MR. HELMAN: With deference, my position is simply this, and I would like to emphasize it: this Board is set up to determine how much energy, amongst other things, should be exported from this Province. Now, if the collection of gas involves



the destruction of the sulphur, I submit this Board could not permit the export of any gas whereby a valuable element of it is going to be either lost or destroyed, and that is the reason I am pursuing this. I am pursuing this because I think it is vital that if \$16 per ton worth of sulphur is produced with this energy that is going to be exported that this Commission should not permit it to be exported unless we see what is going to happen to that tonnage, because otherwise the great economic waste that is going to arise will prevent the export of that at the present time.

THE CHAIRMAN: I am sure Mr. Frawley will agree with this statement -- I know exactly what you are getting at, Mr. Helman, but I am sure Mr. Frawley agrees that the Province of Alberta has control of its natural resources and intends to hold on to it.

MR. HELMAN: I hope so.

THE CHAIRMAN: This Commission has no jurisdiction to make any such decision as you suggest, and it is a matter completely for the Province of Alberta as to the fields from which the gas comes which might be exported from the Province, as I see it.

MR. HELMAN: Do I take it from your remarks, Mr. Chairman, that you are not concerned with whether or not the export of energy is going to



waste sulphur?

THE CHAIRMAN: I did not say that. It is not our decision to say from what fields in Alberta it should come. We have no such power of decision. We have only the power of recommending, on a national scale; and your own Conservation Board is here, as I understand the situation, to deal with what shall I say is a Provincial problem.

MR. HELMAN: When I said you were not concerned, Mr. Chairman, I didn't mean that you were not concerned personally.

THE CHAIRMAN: As a Canadian, I am very much concerned.

MR. HELMAN: All I am trying to see is if the Commission is concerned, because I think it is a vital problem as to the amount of energy you can get from an oil well.

THE CHAIRMAN: I will bow to Mr. Frawley, as a lawyer, to tell me whether that is the proposition, as I have stated it.

MR. FRAWLEY: I certainly agree with you, sir, that the Province of Alberta has control of its resources. To the extent to which this would come within the purview of the Conservation Board we can be sure it would receive all the consideration it deserves.

What bothered me a little bit about it was why we have this Jefferson Lake Sulphur Company



here and to what extent it is vital to the West-coast project. I do not want to say it is fantastic for Mr. Lewis to try to sell sulphur against the barge-delivered sulphur in Eastern Canada or against the barge-delivered sulphur on the west coast. My little bit of experience in freight rates would make me apprehensive of getting into competition with a market which is served by water. If anybody doubts that, they may look at the Montreal oil refinery market. I think we can pursue it too far and I only pursued it because I wanted to find out from Mr. Lewis just how serious he was about his intention to market this sulphur in Canada against a very tough competitor, this giant Texas Gulf Sulphur Company, which seems to be supplying a great part of the Canadian market now. If he can do it with our sulphur, I am very much in favour of it, so much so that I made some inquiries on my own without ever knowing that this gentleman had some plans to do it.

I think perhaps Mr. McDonald should tell us to what extent this sulphur is vital to the development by Westcoast of the gas reserves that they expect to put through their pipeline. To me, it seems a secondary matter and I do not want to leave any impression that I am deprecating the efforts of this sulphur company to come up here and develop our natural resources; but I think we should have



the gentleman's feet on the ground, because he may present something which would be related to the thing we are concerned with, the exportation of energy, namely, natural gas.

THE CHAIRMAN: I still fail to see, no matter what this Commission might recommend with respect to the export policy, surely it would then be up to the Conservation Board of Alberta and the Province of Alberta itself to decide where the gas comes from that is to be exported, which project and so on.

MR. FRAWLEY: I subscribe entirely to that and, in my examination of the witness, nothing should be taken as an intention of mine towards any contrary viewpoint. I was simply trying to make it a little more realistic to me where the sulphur was going to go. Is he going after the gas or is he going after sulphur? Mr. Lewis tells us, "I am going after the sulphur", and I suppose that means, "If I cannot market my sulphur economically, I will leave the gas there."

Now, I think that is, perhaps, all it amounts to and that is as far as I can pursue it; but I certainly subscribe to what you say, that it is basically a matter for the Province of Alberta.

MR. HELMAN: Could I ask this witness one more question?

Q. Assuming you do not get a market for



the sulphur, Mr. Lewis, do you propose to produce the gas that Westcoast wants from the East Calgary field and the Savanna field?

A. We don't have anything to do with the Savanna Creek field and the gas in the Savanna Creek field.

In the East Calgary field there is gas there that is much lower in sulphur content than the 36 per cent.

Q. Let us talk about the main stuff that you have, the big plant that costs \$15 million or \$27 million; we have had varying figures.

A. That is correct.

Q. Will you go ahead with that project if you haven't got a market for your sulphur?

A. No, sir. We can't.

MR. FRAWLEY: Q. But you are going to go ahead with it because you hope you will get a market for the sulphur?

A. We are sufficiently confident that we are willing to spend the money.

MR. FRAWLEY: More power to you, Mr. Lewis; and, after you get that market, you will let me know what it works out at a ton mile, because I need it on lots of other matters.

THE CHAIRMAN: Mr. Lewis, thank you very much, indeed for coming in; and do not take what these men say too seriously, because I am sure that



if you can come into this part of Canada and produce sulphur and sell it at a profit, everybody is going to be very, very happy.

MR. FRAWLEY: Yes, sir.

MR. CHAMBERS: If the Board please, I did have one or two questions ---

THE CHAIRMAN: Oh, I beg your pardon.

MR. CHAMBERS: --- I would like to put to Mr. Lewis.



BY MR. CHAMBERS:

Q. Mr. Lewis, as I understand it, in reply to Mr. Patterson you indicated that your company was in the gas and oil business in the United States.

A. Yes, and that is correct.

Q. And have you contracts for the sale of gas in that field?

A. Yes, sir.

Q. And I am informed that you recently have completed a contract for the sale of gas in the fields and in view of the discussion that has taken place about field price, will you just tell us where that was and the price and the nature of the discussion?

A. We signed one yesterday with United Gas Pipeline at $7\frac{1}{2}$ cents the first year and a half and $8\frac{1}{2}$ cents the next five years and $9\frac{1}{2}$ cents thereafter.

Q. Where is that field?

A. That is in Goliad County.

Q. That would be in southern Texas, is that correct?

A. Yes.

Q. And how far is that to Houston; would that be the closest city?

A. Corpus Christi.

Q. What distance would you be from



that city?

A. About 100 miles.

Q. What volumes?

A. The field volume is about 100 million feet. We are not selling all of it. That is the total volume in that particular field. This is the Cabeza Creek field.

MR. CHAMBERS: That is all.

THE CHAIRMAN: Excuse me, Mr. Chambers, for having overlooked you.

Thank you very much, Mr. Lewis, for coming.

MR. LEWIS: Thank you, sir, it has been a real pleasure to be here.

THE CHAIRMAN: Mr. Pattillo, Mr. Chambers and Mr. MacKimmie, it would suit the Commission if counsel will agree to it, that tomorrow morning at 9.45 we will go ahead with the Alberta and Southern submission and stand over the Westcoast until Monday morning. I think that would give counsel a better time to prepare. I think Mr. McDonald and Mr. Hetherington would appreciate that and I think the Commission would appreciate it also.

Does that suit you, Mr. Chambers?

MR. CHAMBERS: Yes.

THE CHAIRMAN: And you, Mr. MacKimmie?

MR. MacKIMMIE: Yes.

THE CHAIRMAN: Mr. Pattillo?



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MR. PATTILLO: Yes.

THE CHAIRMAN: We shall go on with the
Alberta and Southern submission tomorrow morning
at 9.45 and, in the meantime, we will adjourn.

---Whereupon the hearing adjourned at 4.40 p.m.
until 9.45 a.m., Saturday, February 15, 1958.

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